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IN THE

Supreme Court of the United States

OCTOBER TERM, 1997

THEIS RESEARCH, INC.

Petitioner

v.

OCTEL COMMUNICATIONS CORPORATION AND
NORTHERN TELECOM INC.

Respondents

**On Petition for Writ of Certiorari
to the United States Court of Appeals
for the Federal Circuit**

PETITION FOR A WRIT OF CERTIORARI

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90 pp

QUESTIONS PRESENTED

In *American Airlines, Inc. v. Lockwood*, the Court granted certiorari to resolve the question of whether juries should decide the validity of patents. 515 U.S. 112 (June 5, 1995). Before any hearing on the merits, however, the case was rendered moot, vacated, and remanded. 515 U.S. 1182. Three years later, this case presents another opportunity to resolve that recurring and important question.

The patent validity issues in this case concern "obviousness" and "anticipation." Under 35 U.S.C. § 103(a), the Patent and Trademark Office does not issue a patent for any invention it determines to have been "obvious." The "obviousness" test compares the claimed invention with the "prior art" (generally, the public or unprotected information available at the time of the invention) and asks whether the invention as a whole would have been obvious to a person having ordinary skill in the subject matter. Under 35 U.S.C. § 102(a), the Patent and Trademark Office does not issue a patent for any invention it determines to be "anticipated." A claimed invention is anticipated if it already appears in the prior art.

After diligently applying these tests, the Patent and Trademark Office issued patents to Peter Theis (pronounced "Tice") for his invention of interactive automated voice processing technologies (including telephone answering uses). Respondent manufacturers sued Theis Research, Inc. (holder of the patent rights) for declaratory relief. They denied infringement and alleged that the patents were invalid as obvious and anticipated in light of the same prior art that had been before the Office when it issued the patents.

In the shadow of comments disparaging the process by which the Patent and Trademark Office examines patent

applications, a jury heard "expert" opinions and then decided the patented inventions were "obvious"—and one of them "anticipated"—in light of the same prior art that had already been before the Office. Except for an anticipation finding as to one prior patent, the trial court upheld the jury's verdict, denying judgment as a matter of law to Theis Research, and entered a declaratory judgment in favor of respondents on these issues. The Federal Circuit affirmed under a "substantial evidence" test.

Even where (as here) all of the prior art was before the Patent and Trademark Office when it made its determination of non-obviousness, the Federal Circuit's approach to these cases still directs a jury to start over and make a de novo determination as to patent validity (though ostensibly under a "clear and convincing evidence" standard). If a jury verdict sets aside the Patent and Trademark Office's determination of non-obviousness, the Federal Circuit affirms if it finds any "substantial evidence" to support the verdict. This process affords the Patent and Trademark Office's determination little deference, and it substitutes a jury's judgment for the Office's, even where the Office has not made a clear error or abused its discretion. The Federal Circuit does not review the Office's determination for clear error or an abuse of discretion.

In light of the foregoing, these questions are presented:

1. Where all of the prior art was before the Patent and Trademark Office, should a jury be invited and empowered to disregard the Office's determinations, substituting its own opinions of obviousness and anticipation (and those of an infringing party's "expert") for the Office's determinations? Or should the trial court have sustained the Office's determinations absent clear error or an abuse of discretion?

2. As patent validity is ultimately a question of law, where all of the prior art was before the Patent and Trademark Office, and the Office determined that the invention was neither obvious nor anticipated, should the Federal Circuit review de novo (a) a jury's verdict overturning the determination of the Office and (b) the trial court's denial of judgment as a matter of law?

Under the Court's decision in *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996), a judge is to construe the claims of a patent in light of the specification and claims to preserve the patent's internal coherence.

3. Should the Federal Circuit review the construction of patent claims de novo in light of the specification and claims?

(Petitioner alternatively requests that the Court grant, vacate, and remand for reconsideration in light of the subsequently issued en banc decision of the Federal Circuit in *Cybor Corp. v. FAS Technologies, Inc.* (Fed. Cir. Nos. 96-1286, -1287, Mar. 25, 1998).)

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4. Should a patent be held invalid under the "on sale" bar of 35 U.S.C. § 102(b) where the invention as a whole was not "fully completed" one year before filing of the patent application? For the purpose of obviousness and anticipation determinations, should an inventor's own work be classified as "prior art" by virtue of the "on sale" bar of 35 U.S.C. § 102(b) where the work as a whole was not "fully completed" with respect to the patented invention?

(Petitioner alternatively requests grant and consolidation with *Pfaff v. Wells Electronics, Inc.*, No. 97-1130, or hold pending the Court's decision in *Pfaff*.)

PARTIES TO THE PROCEEDING

Rule 14.1(b) Statement: In addition to petitioner Theis Research, Inc. (Theis Research), Peter F. Theis was an appellant and cross-appellee in the proceeding before the Court of Appeals whose judgment is sought to be reviewed. Respondents Octel Communications Corporation and Northern Telecom Inc. were appellees and cross-appellants in the proceeding before the Court of Appeals.

The following are also parties to the consolidated actions in the United States District Court (N.D. Cal. Nos. C-92 20217, C-93 20287, C-93 20288) from which the subject appeal was taken: Pacific Telesis Group, Pacific Bell, Pacific Bell Information Services, Airtouch Cellular (formerly PacTel Cellular), PacTel Meridian Systems, Digital Sound Corporation, and Tigon Corporation. Boston Technology, Inc., was previously a party in the trial court.

In addition, by virtue of a stipulation and order entered in *Theis Research, Inc. v. Bell Atlantic Corporation, et al.* (E.D. Va. Civil Action No. 93-296A), the following parties will be directly affected and bound by certain results in this case: Bell Atlantic Corporation, Bell Atlantic Network Services, Inc., The Bell Telephone Company of Pennsylvania, The Chesapeake and Potomac Telephone Company, The Chesapeake and Potomac Company of Maryland, The Chesapeake and Potomac Company of Virginia, The Chesapeake and Potomac Company of West Virginia, Diamond State Telephone Company, New Jersey Bell Telephone Company, Bell Atlantic Mobile Systems, Inc., and Bell Atlantic Meridian Systems. AT&T and Lucent Technologies are bound to the same stipulation by agreement.

Rule 29.6 Statement: There are no parent companies or nonwholly-owned subsidiaries of Theis Research.

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PETITION FOR WRIT OF CERTIORARI

Petitioner Theis Research, Inc. (Theis Research) respectfully prays that a writ of certiorari issue to review the judgment of the United States Court of Appeals for the Federal Circuit entered November 6, 1997. Alternatively, petitioner respectfully requests grant and consolidation with *Pfaff v. Wells Electronics, Inc.* (No. 97-1130), hold pending the Court's decision in *Pfaff*, or grant, vacate, and remand for reconsideration in light of the subsequently issued en banc decision of the Federal Circuit in *Cybor Corp. v. FAS Technologies, Inc.* (Fed. Cir. Nos. 96-1286, -1287, Mar. 25, 1998).

OPINIONS BELOW

The opinion of the United States Court of Appeals for the Federal Circuit appears at Appendix A to the petition and is unpublished. The decision is listed at 132 F.3d 51 (table). The full opinion appears at 1997 WL 697288 (Fed. Cir.). The Final Judgment of the United States District Court for the Northern District of California, entered January 2, 1996, appears at Appendix B to the petition and is unpublished. The District Court's Order on Defendants' Motion for Judgment as a Matter of Law that Claims 1 and 10 of the '436 Patent Are Valid (entered November 14, 1996) (Appendix C), Order on Defendants' Motion for Judgment as a Matter of Law on Validity of Claim 1 of the '817 Patent (entered November 14, 1996) (Appendix D), and Order on Defendants' Motion for Judgment as a Matter of Law on Octel's Infringement of Claims 1 and 10 of the '436 Patent (entered November 14, 1996) (Appendix E) are unpublished.

JURISDICTION

The judgment of the United States Court of Appeals was entered on November 6, 1997. A petition for rehearing was timely filed, refiled with leave of court in a preferred format, and denied by the United States Court of Appeals on December 29, 1997. A copy of the order denying rehearing appears at Appendix F to the petition. An extension of time to file the petition for writ of certiorari was granted to and including April 29, 1998, on March 6, 1998, in Application No. A-662.

The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

STATUTES INVOLVED

35 U.S.C. § 102. *Conditions for patentability; novelty and loss of right to patent*

A person shall be entitled to a patent unless—

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, . . .

* * *

35 U.S.C. § 103. *Conditions for patentability; non-obvious subject matter*

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought

to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

* * *

35 U.S.C. § 282. *Presumption of validity; defenses*

A patent shall be presumed valid. Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid claim. . . . The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

The following shall be defenses in any action involving the validity or infringement of a patent and shall be pleaded:

* * *

(2) Invalidity of the patent or any claim in suit on any ground specified in part II of this title as a condition for patentability,

* * *

STATEMENT OF THE CASE

The Inventions

Peter Theis began working on innovations in telecommunications after the Federal Communications Commission ruled that American Telephone & Telegraph Co. (AT&T) could not prevent customers from connecting privately owned devices to the customer end of a telephone line. *In re Use of the Carterfone Device in Message Toll Telegraph Service*, 13 F.C.C. 2d 420 (1968). Perhaps it was inevitable that Theis Research would end up having to fight the progeny of

AT&T and their major manufacturers/suppliers to vindicate the rights that it holds under Theis' patents.

Equipped with a bachelor's degree in electrical engineering from Yale, an MBA from the University of Chicago, and a decade of experience with computers and computer-controlled equipment, Theis joined a small start-up company and began designing equipment to meet the needs of the commercial market opened up by the *Carterfone* decision. Theis is the inventor or co-inventor with respect to a number of U.S. patents, predominantly in telecommunications.[1]

The patents in question here are United States Patent Nos. 4,539,436 and 4,692,817 (the '436 and '817 patents). These issued for the technology of an interactive automated voice processing system that Theis invented in the early 1970s. The technology has non-telephone uses, but claims 1 and 10 of the '436 patent are limited to telephone applications. More advanced and sophisticated "voice mail" applications developed by others years later built upon the underlying technology that Theis invented.

When Theis made his invention, only simple telephone answering machines were available: the most advanced made an announcement followed by a beep, recorded the caller's message, and hung up. In contrast, Theis invented and brought to market an interactive device, called the Con Mode, that plays a pre-recorded message (a "prompt"), detects when a caller starts and stops speaking or if the caller does not speak, and in

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[1] *See* U.S. Patent Nos. 3,668,325; 4,150,255; 4,152,547; 4,270,024; 4,328,396; 4,539,436; 4,559,416; 4,692,817; 4,719,647; 4,747,125; 4,800,583; 4,856,050; 4,982,420; 5,201,028; 5,315,688; 5,577,163; 5,642,411. *See also* U.S. Patent Nos. 5,301,996; 5,518,363; 5,639,208.

response to a pause, provides one or more additional prompts to get additional information from the caller or to advise that the call is concluded.

While the Con Mode had non-telephone applications, its principal intended use was for automated communication with high volumes of telephone calls.[2] Starting in January 1973, Theis' company delivered the original version of the Con Mode (referred to in this litigation as "Con Mode I") to Montgomery Ward, J.C. Penney, Household Finance Company, and Market Facts for high-volume calling. None of these machines was placed in use before February 4, 1973 (one year before the initial patent application). Theis also dealt with AT&T in this time frame.

While the Con Mode I had worked well in the lab, it was an absolute disaster when placed in the field and used by large numbers of different callers.[3] For several months in the first half

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[2] The simple answering machines that had been available up to that point had proved counter-productive for uses such as catalog ordering. For example, customers typically forgot to answer all of the extensive requests for information that had been played on the single pre-recorded announcement or hung up in frustration.

[3] By way of example, Theis explained what happened at Ward's in Pasadena, Texas: "The call would come in and the person would start to give their name. In the middle of the name the next prompt would come on. Sometimes a prompt would come on without even waiting for a response. Other times the person would give their name and it would not come out. Next question they'd say 'Hello, Hello, Hello out there,' and then finally hang up. I remember the Sunday morning telephone call, 'Why don't you come down here to pick up your machine.' And what had happened was the—I mentioned these three-hour recording decks. A person had called, hung up, and that machine never hung up. And it was not just the machine never hung

of 1973, Theis worked furiously to figure out the problem with the machine.[4]

Finally, Theis considered that with numerous calls, a combination of spurious noise on a telephone line might be triggering the machine just the same as when a person is talking. To solve that problem, Theis employed a "speech detector" to differentiate background noise from when a caller is talking.[5] Similarly, Theis also employed a line interface to detect when a caller had hung up. Further testing confirmed these solutions. The device as ultimately modified (known in the litigation as "Con Mode II") worked and was then marketed with success.

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up but also busied out their line for the whole night. And when they came in the next morning, they had to transcribe the whole tape to see if there might be another order on the tape. And it was a very unhappy situation those months." (Transcript punctuation altered.)

[4] He made a number of adjustments and ran various tests with the help of his engineering assistant, but none of them disclosed the problem that caused the Con Mode I to perform so erratically when it was placed in the field.

[5] A "speech detector" functions by "hearing" all sounds and then discriminating against those sounds that the device is "told" would not be speech. In other words, the device works by a process of elimination. The speech detector that Theis employed to solve the problem with the Con Mode I could "recognize" and, therefore, discriminate against noises such as dial tones, howling signals, and general background line noise. It did not "recognize" and, therefore, would have been "fooled" by noises such as the barking of a dog and, if played for a sufficiently short duration, a touch tone.

History of the '436 and '817 Patents

The next major problem Theis encountered was with the law firm he retained to pursue a patent of the Con Mode technology. The firm ignored his matter and did not file an application until February 4, 1974. This was the first of a series of five continuation-in-part applications that resulted in the '436 patent[6]

The second application ('930) was the subject of *In re Theis*, 610 F.2d 786 (C.C.P.A. 1979). While the Con Mode did not work as a telephone device until several months after the critical date of February 4, 1973, the claims had been drafted broadly to include non-telephone uses. For that reason, the Court of Customs and Patent Appeals held those claims subject to the "on sale" bar of 35 U.S.C. § 102(b) for a claimed invention on the market more than one year before the date of the original application. *In re Theis*, 610 F.2d at 794.

The fifth application ('243) resulted in issuance of the '436 patent on September 3, 1985. Theis brought to the attention of the examiner, among other things, the *In re Theis* proceedings and decision and the extensive history of the innovation of the Con Mode II set forth in the '930 application. The record of the '243 application (known as the file wrapper) confirms that the examiner studied the prior applications, which would have included review of the "Shepard" patent (No. 3,300,586).[7]

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[6] Application serial Nos. 439,445 (filed Feb. 4, 1974); 604,930 (filed Aug. 15, 1975); 605,240 (filed Aug. 18, 1975); 856,105 (filed Nov. 30, 1977); 334,243 (filed Dec. 24, 1981). *See* U.S. Patent No. 4,539,436, "Related U.S. Application Data."

[7] A prior examiner had determined that it was not an obstacle to patentability and, indeed, had concluded that it was only "of interest."

As a continuation of the application for the '436 patent, Theis filed a further application for two claims that had been canceled without prejudice during the '436 prosecution. The claims were amended and resulted in issuance of the '817 patent on September 8, 1987.[8]

Proceedings and Jurisdiction in the District Court

Respondent Octel Communications Corporation (Octel) initiated the underlying litigation by suing Theis Research (of Gurnee, Illinois) in Octel's home territory in the Silicon Valley (N.D. Cal. [San Jose Division], No. C-92 20217). In separate actions, Octel and Northern Telecom Inc. (Northern Telecom) sued Theis Research for declaratory judgments of, among other things, invalidity and non-infringement of the '436 and '817 patents. Theis Research counter-claimed for infringement. Subsequently, Peter Theis was personally sued as a defendant. The actions were brought under 35 U.S.C. § 271 and 28 U.S.C. §§ 2201 and 2202 in the United States District Court for the Northern District of California, which had subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338. The actions were consolidated and involved other claims, defenses, patents, and parties as well.

Octel and Northern Telecom contended that each of claims 1 and 10 of the '436 patent was invalid as obvious—i.e., that in light of the differences between the claimed invention and the prior art, the claimed invention as a whole (comprising technologies of the Con Mode II) would have been obvious to a person of ordinary skill in the art. *See* 35 U.S.C. § 103(a).

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[8] Not limited to telephone applications, these claims concern a means of playing alternate messages according to the length of a response—a feature described in the original patent specification but not included in the Con Mode I.

Everything relied upon by Octel and Northern Telecom as prior art was before the patent examiner who determined the claimed invention to be non-obvious in issuing the '436 patent.[9] In contending that claim 1 of the '817 patent was obvious and anticipated, Octel and Northern Telecom again relied on *the same prior art that was before the examiner who determined that the claimed invention was neither obvious nor anticipated in issuing the '817 patent.*[10]

Numerous issues of validity and infringement of the '436, the '817, and another patent were tried to a jury over five weeks.[11] Octel set the tone in opening statement by disparaging the process by which the Patent and Trademark Office examines patents. Subsequent questioning by Northern Telecom invited the jury to speculate that the patent examiner did not do all of

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[9] As prior art, Octel and Northern Telecom relied upon the Con Mode I, the Shepard patent, "all other prior art identified in the chain of applications leading up to the '436 patent," and "the prior art identified in the prosecution history of the '436 itself." The Shepard patent was a red herring. Their principal expert, Dr. Larky, conceded that the Con Mode I was closer than the Shepard patent to both the '436 patent and the '817 patent.

It is noteworthy that Octel and Northern Telecom never sought reexamination of the Patent and Trademark Office's patent validity determinations pursuant to 35 U.S.C. § 302.

[10] Theis Research presented testimony from a former assistant commissioner of patents who reviewed the prosecution history and stated that all of the '436 and '817 validity issues raised by Octel and Northern Telecom were before the Patent and Trademark Office examiner who determined that the patents should issue.

[11] The verdict form required the jury to decide 16 questions of patent validity, all of them ultimate issues, and 12 questions of infringement, each of which included various sub-parts.

the work indicated by his search notes in the file wrapper, even though there was no evidence to suggest this might have happened. Octel and Northern Telecom relied heavily on the "expert" opinions of Dr. Larky.[12]

The jury found that each of claims 1 and 10 of the '436 patent and claim 1 of the '817 patent was infringed by Octel's Aspen and Sierra VoiceForms applications under the doctrine of equivalents but not infringed by two other Octel applications or the Northern Telecom products.

The jury found that claims 1 and 10 of the '436 patent were "obvious" and that claim 1 of the '817 patent was anticipated by Con Mode I, anticipated by the Shepard patent, and "obvious." Appendix B. In moving for judgment as a matter of law, Theis Research argued that obviousness presented a question of law that had to be decided de novo by the trial court. The trial court acknowledged its role for determination of the ultimate issue, but deemed itself bound by the "presumed" subsidiary findings of the jury, and denied the motion. Appendix C.

Since Theis used a speech detector to solve the major problem of distinguishing background line noise from speech, and since speech detectors were well known to those skilled in the art at the time of the invention, the trial court erroneously assumed that the Con Mode II was obvious in light of the Con Mode I. Appendix, pp. C-3 - 4. The principal flaw in the trial

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[12] Dr. Larky never designed a telephone answering system or a voice mail system, never wrote on speech processing or voice mail, and never received a patent in the telecommunications field. His work at Bell Labs did not involve any sort of announcement systems for responding to telephone calls with recordings of one kind or another and did not involve equipment or devices that did automatic telephone answering.

court's analysis was that the *problem* was not obvious.[13] The record, including the prosecution history, set forth extensive and undisputed evidence of the complexity and difficulty of discovering the problem.[14]

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[13] Discovering the source or cause of a problem is as much a basis for a patentable invention as discovering the solution. The Manual of Patent Examining Procedure governing Patent and Trademark Office examiners states in relevant part at § 2141.02 *Differences Between Prior Art and Claimed Invention*:

> "'[A] patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the "subject matter as a whole" which should always be considered in determining the obviousness of an invention under 35 U.S.C. § 103.'[Citation.]"

The jury also apparently failed to memorize this rule (which was stated succinctly in the course of a protracted trial amidst innumerable other issues).

The trial court further erred because there was no prior art teaching of the motivation to utilize a speech detector with the Con Mode I for the purpose of distinguishing speech from background line noises. The trial court "impermissibly used hindsight to reconstruct the claimed invention from prior art with the invention before it . . .." *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051 (Fed. Cir. 1988).

As a separate matter, the trial court failed to construe the claims of the '930 application to determine judicially the effect of *In re Theis*. Instead, the trial court simply assumed that the prior art included the Con Mode I even though it was sold as a telephone device but was inoperable for that purpose before the critical date. This misconstrues the effect of *In re Theis*, where the court stated: "Prior art is not involved in this case." 610 F.2d at 794.

[14] 35 U.S.C. § 103(a) provides in relevant part: "Patentability shall not be negative by the manner in which the invention was made." As stated in the historical and revision notes, Congress added this

The parties filed timely appeals and cross-appeals from the judgment and various post-trial orders. [15]

The Decision of the Federal Circuit

The Federal Circuit affirmed every issue raised on appeal. It reviewed under a straight substantial evidence test the jury's determinations of invalidity. "TRI's arguments do not overcome its heavy burden of demonstrating that there is no substantial evidence from which a reasonable jury could conclude that the claimed invention would have been obvious from the prior art." Appendix, p. A-7. Instead of reviewing the

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provision in the 1952 Patent Act to clarify that "it is immaterial whether [the invention] resulted from long toil and experimentation or from a flash of genius." In other words, 99% perspiration is as good a basis for a patent as 1% inspiration.

[15] The trial court upheld the jury's determinations that Claim 1 of the '817 patent was obvious and anticipated by the Con Mode I. Appendix D. Petitioner's contentions regarding the Federal Circuit's misguided jurisprudence of obviousness determinations apply with equal force to the erroneous determination that claim 1 of the '817 patent was anticipated.

The trial court denied the motion of Theis Research for judgment as a matter of law as to infringement by the other Octel applications. Appendix E. In light of the patent specification, claims, and prosecution history set forth in the file wrapper, the trial court's construction of pertinent claim terms was erroneous.

Octel and Northern Telecom spent several hundred thousand dollars making movies as part of their show for the jury. The clerk's office rejected their attempt to charge these videotape production expenses as recoverable cost items. The trial judge overrode this decision, awarding costs to Octel and Northern Telecom against Theis Research in the amount of $385,737.79.

relevant patent records directly, it counted as "substantial evidence" the opinions of Dr. Larky.[16]

The Federal Circuit was unresponsive to petitioner's emphasis that, as to all of the alleged prior art, *"[t]he PTO Examiner was aware of this prior art and* the *In re Theis* decision." (Emphasis in original.) "The Examiner was satisfied and issued the patent. Nothing has been presented by Octel et al. to show the Examiner was wrong."

As to infringement of the '436 claims by Octel's other applications (in addition to VoiceForms), the Federal Circuit simply ignored several of Theis Research's contentions as to erroneous construction of claims by the trial court. The Federal Circuit failed to undertake a de novo review of the claims construction with reference to the specification, the claims, and the prosecution history contained within the file wrapper.[17]

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[16] The Federal Circuit declined to interpret the claims in the '930 (*In re Theis*) application with respect to ascertaining the limits of the prior art applicable to the telephone applications of the '436 patent. Appendix, p. A-6. Comparing claim 1 of the '817 patent with the '930 application, Larky erroneously relied on a schematic of the specification—saying, in effect, that the invention anticipated itself. The claims of the '817 patent related to components in the specification that were not included in the Con Mode I. Appendix, pp. A-13 - 14.

[17] As to one claim element, the Federal Circuit simply relied on an extraneous statement by Peter Theis—taken out of context—concerning his subjective understanding of the meaning of the decision of the Court of Customs and Patent Appeals in *In re Theis*. Appendix, p. A-9. The Federal Circuit's reliance on "fact" testimony to construe the F.2d opinion of its predecessor typifies its failure to decide questions of law.

REASONS FOR GRANTING THE PETITION

1. Overview: Why This Case Has Important National Implications

"This is a patent case." The very words cause the eyes to glaze over. But America's independent inventors and small businesses depend heavily on the patent system. The Federal Circuit's recent approach to patent validity determinations is now flooding the patent system with uncertainty—casting a chilling effect on the inventive community, investment, and the marketing of new technologies.

The patent system is now being undermined by a combination of judicial interference and neglect that needs to be addressed by this Court. Technological innovation has played a major role in the Nation's emergence as the leader of today's world. The patent system has allowed that innovation to be achieved—perhaps best achieved—in the uniquely American climate that respects the independence of the inventive process. The source of that innovation is being chilled rather than encouraged.

Even though the obviousness or non-obviousness of a patented invention is ultimately a question of law,[18] recent years have seen a proliferation of juries deciding obviousness and other challenges by alleged infringers to patent validity.[19]

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[18] *See Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966); *Panduit Corp. v. Dennison Mfg. Co.*, 818 F.2d 1561, 1566-1567 (Fed. Cir. 1987).

[19] *See In re Lockwood*, 50 F.3d 966, 980 & n.1 (Fed. Cir. 1995) (dissent from denial of en banc rehearing), *vacated and remanded sub nom. American Airlines, Inc. v. Lockwood*, 515 U.S. 1182 (1995).

Notwithstanding the statutory presumption of validity (35 U.S.C. § 282), the Federal Circuit has placed juries in the position of redoing the work of the Patent and Trademark Office. Even where (as here) all of the prior art was before the Patent and Trademark Office when it made its determination of non-obviousness, the Federal Circuit's approach still directs a jury to start from the beginning and make a de novo determination as to patent validity. Often a jury must make these retrospective decisions many years after a patent has issued—long after the invention has become part of ordinary trade and commercial use.

The Federal Circuit now leaves juries' legal determinations of invalidity effectively unreviewed. Liberal use of a light "substantial" evidence standard characterizes the Federal Circuit's sweeping and broad-brush affirmance of every issue in this case, notwithstanding the presence of judicial questions appropriate for de novo review. Patent holders are effectively deprived of "the appellate review that is a component of the one full and fair opportunity to have the validity issue adjudicated correctly." *See Cardinal Chemical Co. v. Morton International, Inc.*, 508 U.S. 83, 102 (1993).

The Federal Circuit's approach to collateral review of patent validity abandons its role of assuring national uniformity in the resolution of legal questions in patent cases. As discussed below, this erosion culminates a trend in the Federal Circuit. Admittedly, the issues in this and many other patent cases are difficult, enigmatic, and complex. *And yet the Federal Circuit's current approach disdains reliance on the one agency designed by Congress to do the heavy lifting: the Patent and Trademark Office.*

Ironically, by undermining the determinations of the Patent and Trademark Office, the Federal Circuit not only increases the

workload of the courts (judges and juries) in each case, it encourages more patent litigation, escalating litigation costs and expenses, and a proliferation of "expert" testimony to reopen and reexamine the work of the Patent and Trademark Office. The Federal Circuit is fostering judicial encroachment on the executive responsibilities properly entrusted to the Patent and Trademark Office. That patent validity is ultimately a question of law does not undermine the appropriateness of judicial deference to the administrative determination of the Patent and Trademark Office. Judicial deference to the determinations of a responsible administrative agency extends to questions of law (*See Chevron U.S.A. v. Natural Res. Def. Council*, 467 U.S. 837, 844-845 (1984)), particularly with respect to a highly technical regulatory program requiring significant expertise (*Thomas Jefferson Univ. v. Shalala*, 512 U.S. 504, 512 (1994); *Pauley v. BethEnergy Mines, Inc.*, 501 U.S. 680, 697 (1991)). This accords with the presumption of patent validity set forth in 35 U.S.C. § 282.

While infringement questions may be more a matter of private concern, questions of patent validity are of importance to the public at large. *Cardinal Chemical Co. v. Morton International, Inc.*, 508 U.S. at 100. The uncertainty generated by the Federal Circuit's approach permeates the industry for the life of the patent and has a chilling effect. It increases risks for investors, increases the difficulty of start-up and getting innovations to market, and encourages infringement.

Why Review an Unpublished Decision?

The unusual combination—of (1) a case worthy of review and (2) an unpublished opinion by the Court of Appeals—is no coincidence in this case. The practice of saddling juries with complex questions of law and then conducting no meaningful appellate review does not generate the kind of work product

that typically gets framed in a published opinion.[20] Yet that very practice is systematically destroying the reliability of the Patent and Trademark Office's administrative process for issuing patents. This case opens a window to the Federal Circuit's actual practice and its real consequences.

The absence of a reported opinion demonstrates that the standard of review as applied in this case accords with what has become the Federal Circuit's routine practice. The Federal Circuit felt no need to explain its decision in a reported opinion when it was not deviating from its current custom and practice. "Because the Federal Circuit has exclusive jurisdiction over appeals from all United States District Courts in patent litigation," the rule that it applied in this case, and has been applying routinely, is a cert.-worthy "matter of special importance to the entire nation." *See Cardinal Chemical Co. v. Morton International, Inc.*, 508 U.S. at 89.

This case has other practical implications of great significance that are not likely to receive discussion in the pages of published lower court opinions. The commercially valuable patents of independent inventors have become bait for litigation. It is no secret why a substantial infringer would prefer a random and costly litigation process over a request for reexamination of patent validity by the Patent and Trademark Office under 35 U.S.C. § 302. Rather than obtain licenses to use these patents, major infringers are economically motivated to intimidate under-financed patent holders with threats of costly trials of validity

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[20] Through this practice, the Federal Circuit transparently avoids the admittedly difficult task of genuinely reviewing validity determinations, mandated by this Court. *See Cardinal Chemical Co. v. Morton International, Inc.*, 508 U.S. at 99-100 (affirmance of non-infringement not a proper basis to vacate validity determination to avoid the work of appellate review).

issues, disappearing deference to the Patent and Trademark Office, the statistical inevitability that sooner or later a legitimate patent claim will be defeated by a jury, and a vacuum in judicial review by the Federal Circuit. These threats are real and, therefore, effective.

It is increasingly difficult for an independent inventor to survive the mauling of litigation to reach the doors of this Court to press the interests raised by this petition.

Fundamental Questions About the Role of the Judiciary

This case nevertheless provides the Court with the alternative of choosing narrower or broader grounds for decision. It may be used to address specifically the proper role of the courts in adjudicating particular issues that have already been determined by the Patent and Trademark Office (questions of obviousness and anticipation where the Office had before it the same prior art on which the patent is challenged). This case may also be used to address more broadly the proper roles of the Federal Circuit and of trial judges or juries in deciding questions of patent validity.

Either way, the issues are fundamental—

- the judiciary vis-à-vis the Patent and Trademark Office
- the Federal Circuit vis-à-vis the trial courts
- judges vis-à-vis juries

—and should be resolved by this Court.

2. Through Its Use of Juries and the "Substantial Evidence" Test, the Federal Circuit Has Abandoned Its Role of Assuring Consistency in Patent Validity Determinations

The Importance of Consistency

This Court has proclaimed the responsibility of the Federal Circuit to promote consistency in patent cases. In *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 116 S.Ct. 1384 (1996), the Court identified the importance of uniformity as an independent reason for patent claims to be construed by courts rather than juries. *Id.*, 116 S.Ct. 1396

> "It was just for the sake of such desirable uniformity that Congress created the Court of Appeals for the Federal Circuit as an exclusive appellate court for patent cases, H. R. Rep. No. 97-312, pp. 20-23 (1981), observing that increased uniformity would 'strengthen the United States patent system in such a way as to foster technological growth and industrial innovation.' *Id.*, at 20."

Id., 116 S.Ct. at 1396. When upholding the doctrine of equivalents as a basis for finding patent infringement, the Court noted in *Warner Jenkinson Co. v. Hilton Davis Chemical Co.*, __ U.S. __, 117 S.Ct. 1040 (1997) the responsibility of the Federal Circuit "to promote certainty, consistency, and reviewability to this area of the law." *Id.*, 117 S.Ct. at 1053 n.8.

The responsibility of the Federal Circuit to promote consistency applies with particular force to issues of patent validity. As discussed above, questions of patent validity have importance to the public at large. *Cardinal Chemical Co. v. Morton International, Inc.*, 508 U.S. at 100. Uncertainty concerning patent validity affects investors, the employees of

small businesses that develop innovations, and the general industry that the patent concerns, including competitors.

The Federal Circuit's failure to promote consistency in obviousness determinations is particularly surprising given the long-standing recognition that obviousness is ultimately a question of law. *See Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966); *Panduit Corp. v. Dennison Mfg. Co.*, 818 F.2d 1561, 1566-1567 (Fed. Cir. 1987). *Graham* identified several "factual inquiries" that underlie the ultimate legal question of obviousness.[21]

In *Dennison Mfg. Co. v. Panduit Corp.*, 475 U.S. 809, 811 (1986), this Court vacated and remanded a Federal Circuit decision reversing the obviousness determination by a District Court judge. The Court directed the Federal Circuit to explain its review of obviousness determinations and to discuss whether Fed. R. Civ. P. 52(a) (clear error standard for review of findings of fact by trial judge) should apply to review of obviousness determinations. In its opinion on remand, *Panduit Corp. v. Dennison Mfg. Co.*, 818 F.2d 1561, 1566-1568 (Fed. Cir. 1987), the Federal Circuit cited and concurred with long-standing and wide-spread authority that the question of obviousness is one of law. The court acknowledged the appropriateness of Fed. R. Civ. P. 52(a) review for subsidiary factual findings by judges, and then proceeded to scrutinize the ultimate legal issue in detail, reversing the lower court's conclusion of obviousness. *Id.* at 1569, 1574-1582. The

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[21] These are: the scope and content of the prior art; differences between the prior art and the claims at issue; the level of ordinary skill in the pertinent art; and secondary considerations that might provide perspective, such as commercial success, long felt but unresolved needs, failure of others, etc. *Graham v. John Deere Co.*, 383 U.S. at 17-18.

Federal Circuit explained the importance of its diligence eleven years ago in scrutinizing a legal conclusion of obviousness:

> "The law must be the same for all patents and types of inventions. A level playing ground for the marketplace of ideas is as necessary for technological innovation as it is for politics and social policy."

Id. at 1573-1574.

The Proliferation of Juries in Patent Cases

While the Federal Circuit in *Panduit* methodically reviewed the obviousness determination by a trial court judge, a developing trend would set the stage for the Federal Circuit's eventual abandonment of meaningful review: the proliferation of juries in patent cases. While jury trials comprised less than 4% of patent trials between 1968 and 1970, 60% of patent trials from 1992 to 1994 were tried to juries, and by 1994, 70% of patent trials were tried to juries. *See In re Lockwood*, 50 F.3d 966, 980 & n.1 (Fed. Cir. 1995) (dissent from denial of en banc rehearing), *vacated and remanded sub nom. American Airlines, Inc. v. Lockwood*, 515 U.S. 1182 (1995).

Legal determinations of validity, however, are not made appropriate for jury deliberations by the fact-based nature of the underlying inquiries.[22] The analysis adopted by this Court in *Markman v. Westview Instruments, Inc.* with respect to the role of courts in interpreting patent claims is germane to patent validity issues:

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[22] Dissenting in *In re Lockwood*, Judge Nies argued forcefully that while damages claims for infringement are properly subject to a right to jury trial, the validity of a patent involves public rights, not private rights, and no Seventh Amendment jury rights adhere to a determination of public rights. *Id.*, 50 F.3d at 981-983.

> "'Where technical terms are used, or where the qualities of substances or operations mentioned or any similar data necessary to the comprehension of the language of the patent are unknown to the judge, the testimony of witnesses may be received upon the subjects, and any other means of information be employed. *But in the actual interpretation of the patent the court proceeds upon its own responsibility, as an arbiter of the law, giving to the patent its true and final character and force.*'"

116 S.Ct. at 1394-1395 (emphasis added by the Court).

The Abandonment of Review of Obviousness Verdicts

In *Connell v. Sears Roebuck & Co.*, 722 F.2d 1542, 1547 (Fed. Cir. 1983), the Federal Circuit held that the question of obviousness may be submitted to a jury, but suggested the use of interrogatories to aid in judicial review of the verdict. Subsequently, the Federal Circuit endorsed submission of the ultimate question of obviousness to the jury without requiring any subsidiary findings. *See Jurgens v. McKasy*, 927 F.2d 1552, 1557 (Fed. Cir. 1991). The Federal Circuit then described a two-step method of judicial review: first, the court presumed that the jury resolved the underlying factual disputes in favor of the verdict winner and left those "presumed" findings undisturbed if they were supported by substantial evidence; second, the court examined the legal conclusion de novo to see whether it was correct in light of the "presumed" jury fact findings. *Id.* at 1557.

Ultimately, the Federal Circuit abandoned any pretense of "second step" de novo review of the ultimate legal question. In authority relied upon by Octel in its briefing to the Federal Circuit below, the Federal Circuit held in *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1559 (1997) that in reviewing jury

verdicts holding patent claims invalid for obviousness, so long as the instructions were correct, the court simply determines whether "there was substantial evidence whereby a reasonable jury could have reached the verdict reached by this jury." In the judgment below, the Federal Circuit employed this minimalist standard: "TRI's arguments do not overcome its heavy burden of demonstrating that there is no substantial evidence from which a reasonable jury could conclude that the claimed invention would have been obvious from the prior art." Appendix, p. A-7.

As a practical matter, the "substantial evidence" standard of review is no standard at all in these cases. Parties will always be able to find hired gun "expert" witnesses to put on the stand. The infringer of a commercially valuable patent will always find it worth investing in "expert" witnesses. Inevitably, the "evidence" of the "expert's" opinion will always be found to satisfy "'that minimum quantum of evidence from which a jury might reasonably afford relief.'" *U.S. Surgical Corp. v. Ethicon*, 103 F.3d at 1559. This truth is demonstrated in the decision below by the Federal Circuit's liberal reliance on the opinions of Dr. Larky in affirming the obviousness verdicts as to the '436 and '817 patents. Appendix, pp. A-5 - 7, A-13 - 14.

One Federal Circuit judge recently admitted that the current practice leaves jury verdicts of obviousness effectively unreviewed:

> "But when the issue of obviousness may properly go to the jury, how can the jury's fact findings be separated from its legal determination? Absent special verdicts or interrogatories, the fact findings of the jury are unknown and must be inferred from the jury's verdict. This approach is cumbersome and may allow jury errors to go uncorrected."

(Circuit Judge) Paul R. Michel & Michelle Rhyu, *Improving Patent Jury Trials*, 6 Fed. Circuit B.J. 89 (1996).

In *Warner Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, this Court noted "concern over unreviewability due to black box jury verdicts, ..." 117 S.Ct. at 1053 n.8. The Court provided the Federal Circuit with guidance as to means for preserving reviewability of verdicts on infringement claims under the doctrine of equivalents (for which there is a right to jury trial.) *Id.* The Court concluded, "We leave it to the Federal Circuit how best to implement procedural improvements to promote certainty, consistency, and reviewability to this area of the law." *Id.* The demise of meaningful review of obviousness determinations demonstrates that the Federal Circuit has moved in a direction contrary to the guidance provided by this Court. Certiorari is appropriate to correct the course.

3. The "Clear and Convincing Evidence" Standard Does Not Afford True Deference to the Administrative Determinations of the Patent and Trademark Office

35 U.S.C. § 282 mandates that a patent shall be presumed valid and that the burden of establishing invalidity of a patent or any patent claim shall rest on the party asserting such invalidity. The Federal Circuit previously recognized that the burden of attacking patent validity should be particularly great where all of the material prior art was before the Patent and Trademark Office when it issued the patent. *American Hoist & Derrick Co. v. Sowa & Sons*, 725 F.2d 1350, 1359 (Fed. Cir. 1984).

In theory, it might be suggested that the "clear and convincing evidence" standard applicable to all challenges to patent validity might be sufficient to foster deference to the administrative determination. In the real world of jury trial practice, however, this simply does not happen.

Where the material prior art was before the patent examiner, the only effective means to assure deference is to require the party asserting invalidity to demonstrate clear error by the Patent and Trademark Office. Instead, the approach now followed by the Federal Circuit always starts the jury at ground zero to retry the same issues based on the same evidence—except that "expert" opinions are introduced to challenge the judgment call previously made by the Office.

The same complexities and technical difficulties that underscore the appropriateness of deference have the opposite effect when these issues are tried to a jury de novo. Lacking the training and expertise to take command of numerous enigmatic issues (both legal and technical), jurors are likely to become captives of the "expert" witnesses who are hired to give opinions.

This creates a major obstacle to deference: the chair of the patent examiner is empty. It defies human nature to ask jurors to place more confidence in a patent examiner who—as far as the jurors are concerned—is a ghost, rather than the polished "experts" who develop a personal rapport with the jurors at the trial (particularly when the jurors hear comments disparaging the examination process of the Patent and Trademark Office).

The deference to be accorded by the judiciary to the patent validity determinations of the Patent and Trademark Office—both in theory and in practice—is a fundamental issue appropriately resolved by this Court.

4. Compared to the Patent Examiners, a Jury Is at an Astonishing Disadvantage to Make Correct, Fully-Informed Decisions

To a juror coming into the trial of this case, it must have felt like entering a foreign country without knowing the language—and then being told to promulgate its laws at the end of 5 weeks.

The lower courts in this case simply substituted the jury's judgment call for that of the Patent and Trademark Office. That begs a comparison of the processes by which the jury and the patent examiner make their respective decisions, bearing in mind that "it is more difficult to determine whether a patent is valid than whether it has been infringed . . .." *See Cardinal Chemical Co. v. Morton International, Inc.*, 508 U.S. at 99.

Jurors commence their review of a case without any particular training or experience in either the technical field or the law of patent invalidity. They are asked to learn quickly the details of highly technical information, without any substantive knowledge of a highly complicated field of law.[23] In this case, the jury heard five weeks of testimony and then, all at once, was asked to rely on memory to decide some 30 ultimate issues concerning 3 separate patents and 4 patent claims.

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[23] Because jurors are generally not instructed until after closing, it is particularly difficult for them to recognize what evidence is significant in such an esoteric area of the law. Further, explanations by witnesses of complex scientific information are frequently interrupted by objections and lawyer colloquies, not infrequently distracting the jurors at moments of critical testimony.

With respect to obviousness, a jury is given the incredible burden of determining what would or would not have been obvious to a person of "ordinary skill in the art" *at the time of the invention*, deciding *many years after the fact*, what this hypothetical person would have known and thought.[24]

By contrast, patent examiners are technical specialists who work in groups organized by particular disciplines. Examiners study the facts while reviewing the legal criteria simultaneously. They have at their disposal one of the great libraries of scientific and technical information in the world. A primary examiner is assisted by another examiner and their work is supervised. The examiner evaluating an issue of obviousness generally has the opportunity to make that determination at a point much closer in time to the invention than the jury's determination. In sum, the examiner is in a far superior position to make the judgment call required by validity determinations.

5. The Federal Circuit Should Review the Construction of Patent Claims De Novo in Light of the Specification, Claims, and Prosecution History Available to the Public

In *Markman v. Westview Instruments, Inc.*, the Court held that construction of patent claims is properly allocated to judges rather than juries. In rejecting arguments that the need to rely on expert testimony required juries to weigh the credibility of such witnesses, the Court eschewed the aggrandizement of

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[24] The jury is asked not only to learn substantial amounts of deeply technical information, it is asked to strip away all awareness of the present world—going back in time to the moment when the invention was made and well before the invention has lost its novelty and become part of everyday use and commercial trade.

expert opinions in patent claim construction—emphasizing instead the immutable duty of the judge to construe claims in light of the patent document. *Id.*, 116 S.Ct. at 1384 (duty to determine whether definition "comports with the specification and claims and so will preserve the patent's internal coherence").

In this case, the trial court misconstrued the patent claims. On appeal, the Federal Circuit failed to construe the claims de novo according to the specification, claims, and prosecution history set forth in the file wrapper.[25]

In *Markman*, this Court did not have occasion to decide whether Federal Circuit review of patent claim construction by trial courts should be de novo. Nevertheless, the Court's emphasis on the importance of national uniformity strongly supports de novo review of claim construction by the Federal Circuit. *See id.*, 116 U.S. at 1396.

Because the Federal Circuit has subsequently held en banc in *Cybor Corp. v. FAS Technologies, Inc.* (Fed. Cir. Nos. 96-

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[25] Construing the claims of a patent according to the specification, the claims, and the prosecution history contained within the file wrapper best promotes public knowledge and understanding of the meaning of the claims. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978-979 (Fed. Cir. 1995), *aff'd* 517 U.S. 370 (1996).

The patent document and the file wrapper are public documents. The public should not be surprised at a later date by the construction of claims based on extraneous evidence or subjective intent. *See Markman v. Westview Instruments, Inc.*, 116 S.Ct. at 1396 ("'[t]he limits of a patent must be known for the protection of the patentee, the encouragement of the inventive genius of others and the assurance that the subject of the patent will be dedicated ultimately to the public'").

1286, -1287 Mar. 25, 1998) that patent claim construction should be reviewed de novo, petitioner alternatively requests this that Court grant, vacate, and remand to the Federal Circuit for reconsideration in light of its subsequent decision in *Cybor*.

6. An Inventor's Own Work Should Not Be Classified As "Prior Art" by Virtue of the "On Sale" Bar When the Work Was Not Fully Completed With Respect to the Patented Invention

The Court has granted certiorari in *Pfaff v. Wells Electronics, Inc.*, (No. 97-1130) to address whether a patent should be held invalid under the "on sale bar" of 35 U.S.C. § 102(b) where the invention was not "fully completed" one year before the filing of the patent application. This case presents the same basic issue within the context of defining prior art for obviousness determinations.[26] The Federal Circuit's current application of the one-year "on sale" trigger to products that are not fully complete demonstrates a striking lack of appreciation for the real world of independent inventors and small businesses. [27]

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[26] In *Pfaff*, the product was not complete because it had not been built. In this case, the Con Mode I was not complete because it was inoperable. The Con Mode I was marketed as a telephone device and failed to work as such before the critical date. It should not have been treated as prior art for telephone use by virtue of the simple fortuity that it had non-telephone alternate uses.

[27] Lacking the funds needed for a "real world" laboratory test, independent inventors and small businesses must test their products in the marketplace. Because of the complexity and sophistication of modern inventions—and the frequency with which they involve innovations that are integrated with other products—small businesses

CONCLUSION

Based on the foregoing, Theis Research respectfully requests that the Court grant this petition.

Respectfully submitted,

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April 29, 1998

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and independent inventors increasingly have to finish their innovations in the marketplace. They have no alternative.

Furthermore, small businesses and independent inventors are not typically equipped with an in-house staff of patent attorneys or discretionary funds to prosecute applications for inventions that may or may not prove workable.

NOTE: Pursuant to Fed. Cir R. 47.6, this disposition is not citable as precedent. It is a public record. The disposition will appear in tables published periodically.

United States Court of Appeals for the Federal Circuit

97-1176, -1178, -1179

OCTEL COMMUNICATIONS CORPORATION,

Plaintiff/Cross-Appellant,

and

NORTHERN TELECOM, INC.,

Plaintiff/Cross-Appellant,

and

PACTEL MERIDIAN SYSTEMS,
BOSTON TECHNOLOGY, INC.
and DIGITAL SOUND CORPORATION,

Plaintiffs,

v.

THEIS RESEARCH INC. and PETER F. THEIS,

Defendant-Appellants.

DECIDED: November 6, 1997

Before SCHALL, Circuit Judge,
SKELTON, Senior Circuit Judge,
and BRYSON, Circuit Judge.

BRYSON, Circuit Judge.

Theis Research, Inc., and Peter F. Theis (collectively, TRI) appeal from a judgment of the United States District Court for the Northern District of California following a jury trial in this patent infringement case. Octel Communications Corporation (Octel) and Northern Telecom, Inc. (NTI) cross-appeal from certain aspects of the same judgment. Although the parties have raised a multitude of issues, we conclude that the district court did not commit reversible error with regard to any of them. We therefore affirm the judgment in all respects.

BACKGROUND

At issue in this appeal are five U.S. patents owned by TRI that relate to automated telephone answering systems. U.S. Patent No. 4,539,436 (the '436 patent) describes a voice-actuated telephone answering machine sold by TRI under the name "Con Mode." U.S. Patent No. 4,692,817 (the '817 patent) contains the same written description as the '436 patent, but claims different features of the disclosed machine. U.S. Patent No. 4,719,647 (the '647 patent) describes a message retrieval system that includes a plurality of answering machines with associated message memory units. U.S. Patent No. 4,439,635 (the '635 patent) generally describes a message delivery system that includes a plurality of playback units, each of which stores a segment of a voice message. Finally, U.S. Patent No. 4,150,255 (the '255 patent) describes a call distributor and holding system that permits one or more operators to service a large number of callers. The '436 and '817 patents claim priority to an earlier patent application, the claims of which were held to be invalid under 35 U.S.C. § 102(b) due to prior sales of the Con Mode system. See In re Theis, 610 F.2d 786,201 USPQ 188 (CCPA 1979).

Octel designs, manufactures, and sells voice information processing systems that operate over touch-tone telephone lines. Octel's systems include the Sierra and Aspen systems, each of which can be configured to operate in one of three different applications: a telephone answering application, a voice mail application, or a Voice Forms application.

NTI's Meridian Mail and Startalk systems are voice mail and telephone answering systems that provide multiple voice processing features accessible through a touch-tone keypad. NTI's AABS system operates within a public switched telephone network to automatically interact with a caller in order to handle credit card calls, collect calls, and third party billing calls.

DISCUSSION

Octel and NTI sued TRI, seeking a declaratory judgment that their products do not infringe TRI's patents and that TRI's patents are invalid and unenforceable. TRI counterclaimed, alleging that various Octel and NTI products infringe the TRI patents.

After the district court granted summary judgment on several issues, and after the court conducted a bench trial on Octel's and NTI's claim of inequitable conduct, the remaining issues were tried to a jury. The jury found a number of TRI's patent claims invalid and found that Octel and NTI did not infringe those claims that were not invalidated. Having lost on most of the contested issues at trial, TRI raises a large number of points on appeal to this court.

I. The '436 Patent

The parties appeal seven issues concerning the '436 patent. The jury found claims 1 and 10 of TRI's patent to be

invalid for obviousness and, with one exception, not infringed by Octel and NTI. TRI appeals the district court's denial of its motion for judgment as a matter of law (JMOL) on the validity and infringement issues. Octel appeals the district court's denial of its motion for JMOL with respect to the one system that the jury found to infringe. NTI appeals the denial of its motion for JMOL on its claim that the '436 patent is invalid for failure to disclose the best mode.

A. Validity

1. Obviousness

The jury found claims 1 and 10 of the '436 patent invalid under 35 U.S.C. § 103 as being obvious in light of U.S. Patent No. 3,300,586 (the Shepard patent) and Con Mode I, a device that was on sale more than one year before the application filing date. The district court denied TRI's motion for JMOL on this issue.

Claim 1 covers an apparatus for carrying on a programmed telephone conversation with a respondent. Among other things, the recited apparatus requires an "interface means for coupling said apparatus to the telephone line"; "a speech detector coupled to the interface means"; and "detecting means, coupled to said speech detector, for detecting a pause in said voice communication of the respondent." Claim 10 is similar to claim 1, but it contains additional limitations requiring that the claimed device be able to operate in both an incoming mode and an outgoing mode, and requiring "means . . . for substantially instantaneously switching said system to said incoming mode."

TRI argues that there is no substantial evidence that the prior art discloses or suggests either the recited "speech detector" or the recited "interface means." We have reviewed

the record carefully, and we conclude that the jury's verdict is supported by substantial evidence.

The '436 patent specification describes the recited speech detector as "a conventional voice actuation circuit, which is for sensing silence (absence of speech) intervals." NTI's expert, Dr. Larky, testified that the prior art Con Mode I device included a type of speech detector and that Shepard showed the recited speech detector. Mr. Prentice, one of TRI's witnesses, admitted that the noise threshold circuit included in the prior art Con Mode I device was intended to detect speech. Another TRI witness, Dr. Gibson, agreed that speech detectors were well known before the patent application was filed, and that the Shepard patent disclosed a "multiple syllable detector to distinguish between yes or no." In addition, Mr. Theis, the inventor, swore in a 1978 affidavit that the Con Mode I device contained a "voice recognition circuit to identify when a caller is talking," although he contended that the circuit failed to perform properly.

Mr. Theis stated in a 1984 affidavit to the PTO that "speech detectors" were well known in the art as of 1974 (the filing date of the '436 patent application) and were even included in the RDM-ZR telephone interface commonly available at that time. At trial, Mr. Theis testified that the recited speech detector design was taken from the "widely distributed, widely used, well-known" RDM-ZR interface.

Regarding TRI's argument that the claimed invention could not have been obvious over the allegedly inoperative Con Mode I, Mr. Theis at trial downplayed the innovation involved in the replacement of the allegedly inoperative voice actuation circuit with the recited speech detector. According to Mr. Theis, the replacement was accomplished simply by "look[ing] to see what was available in the marketplace." As the Supreme Court long ago stated, "reading a list and selecting a known [element] to meet known requirements is no more

ingenious than selecting the last piece to put into the last opening in a jig-saw puzzle. It is not invention." Sinclair Co. v. Interchemical Corp., 325 U.S. 327, 335, 65 USPQ 297, 301 (1944). Accordingly, it was reasonable for the jury to conclude that the claimed "speech detector" was either disclosed or suggested by the prior art.

As for the "interface means" limitation, TRI argues that the phrase "interface means for coupling said apparatus to the telephone line" should be interpreted as "an apparatus coupled to the telephone line and the speech detector which can detect an incoming call, seize the line, transmit the signals on the line to the system, determine when the caller has hung up, and hang up." We decline TRI's invitation to read such limitations into the claim language, and we also reject TRI's suggestion that the recited phrase should be read without regard to 35 U.S.C. § 112, ¶ 6.

TRI admits that the prior art Con Mode I unit included "a line control card that interfaced with the telephone line and recognized a ring signal, seized the telephone line, and released the line when the apparatus finished its cycle." Other evidence in the record shows that this limitation (or obvious variations) was in the prior art. For example, Dr. Larky testified that the Shepard patent disclosed the recited interface means. Mr. Theis's affidavit, submitted to the PTO to secure allowance of the patent, acknowledged that an RDM-ZR – the structure corresponding to the recited "interface means" in the '436 patent – "was a known prior art device." Concerning TRI's assertions that the prior art Con Mode I was inoperative over telephone lines, the Court of Customs and Patent Appeals remarked as to that very device: "We find it difficult to imagine that appellant would demonstrate an inoperative system at a trade show and elsewhere in an attempt to drum up business." In re Theis, 610 F.2d at 794, 204 USPQ at 195.

TRI mentions in passing two other limitations in the '436 patent – the "means . . . for detecting a pause in [the] voice communication of the respondent" and, in claim 10, the "means for substantially instantaneously switching [the] system" to the outgoing or incoming modes. Contrary to TRI's suggestion, there was substantial evidence that both of those limitations were found in the prior art, as Dr. Larky testified that the Shepard patent disclosed both limitations.

TRI's arguments do not overcome its heavy burden of demonstrating that there is no substantial evidence from which a reasonable jury could conclude that the claimed invention would have been obvious from the prior art. Instead, TRI invites us to reweigh the evidence presented to the jury, which is not our task in reviewing a jury verdict.

2. Best Mode

The jury found that the'436 patent was not invalid under 35 U.S.C. § 112 for failing to disclose the best mode. NTI appeals the district court's denial of its motion for JMOL on this issue, arguing that the patent failed to disclose sufficient details of the recited "speech detector." In support of its position, NTI points to the terse reference to the recited speech detector in the written description, which merely notes that the speech detector "may be a conventional voice actuation circuit," and to various statements made by Mr. Theis, which suggest that he expended considerable effort in identifying the type of speech detector needed to overcome inoperability problems.

Although the speech detector is mentioned only briefly in the '436 patent, the evidence shows that speech detectors were well known in 1973, and Dr. Gibson testified that one of ordinary skill in the art would be able to determine the structure of a speech detector from reading the specification, even though no schematic diagram was included. In view of that evidence,

NTI has failed to persuade us that the jury was obliged to conclude that the best mode was effectively concealed. See Spectra-Physics, Inc. v. Coherent, Inc., 827 F.2d 1524, 3 USPQ2d 1737 (Fed. Cir. 1987).

B. Infringement

TRI alleges that five Octel and NTI systems infringe claims 1 and 10 of the '436 patent. We discuss each system separately.

1. Octel's Telephone Answering Application

The jury found that Octel's telephone answering application does not infringe claims 1 and 10 of the '436 patent. TRI appeals the district court's denial of its motion for JMOL on that issue, arguing that (a) the district court incorrectly defined the term "speech detector"; (b) the district court erred in interpreting the claims to require multiple voice responses from a caller; and (c) there is no substantial evidence to support the jury's verdict that claims 1 and 10 are not infringed by Octel's telephone answering application.

As to point (a), the definition of "speech detector" that TRI proposes is not significantly different from the definition that the district court adopted. TRI's objection to the court's definition focuses on the court's use of the term "goal" ("The goal of a speech detector is to sense and respond to speech-like signals and not to be triggered by non-speech signals"), which TRI argues is misleading. The court's language, however, is merely a rephrasing of another portion of the court's definition, which TRI does not contend is inaccurate ("speech detector" is "a specialized type of noise filter which is designed to respond preferentially to speech, as opposed to other noises"). Mr. Theis himself testified during trial that a speech detector

detects "speech-like characteristics" and ignores non-speech signals such as background noise and line noise. Moreover, TRI's own expert admitted during trial that devices that recognize dial tones, busy signals, and ring signals are not "speech detectors." In view of that evidence, we find no error in the district court's definition.

As to point (b), TRI argues that the district court improperly added limitations to the claims by requiring voice responses instead of responses in non-vocal forms such as touch-tone signals. Mr. Theis, however, admitted that in In re Theis he lost patent rights to nonspeech responses, including touch-tone signals. The district court was therefore justified in concluding that touch-tone signals do not qualify as "responses" within the meaning of the '436 patent claims.

As to point (c), there was substantial evidence before the jury that Octel's answering application lacks the "speech detector" recited in claims 1 and 10 of the '436 patent. Mr. Olson testified that the Octel systems do not include the recited "speech detector"; the Octel systems, he testified, would even respond to music and modem signals. Mr. Prentice, TRI's own witness, testified that Octel's systems recognize special tones, unlike speech detectors, which do not.

Finally, TRI contends that because the jury found that Octel's Voice Forms application infringed the claims under the doctrine of equivalents, Octel's telephone answering application must also be held to infringe because of evidence suggesting that the same hardware and software are used in both the Voice Forms and the telephone answering applications. Contrary to TRI's assertion, there was substantial evidence from which the jury could conclude that the Voice Forms application operated in an entirely different manner from the telephone answering application. Moreover, the evidence showed that the Voice Forms application was supplied as a separately purchased item

and therefore would not necessarily contain the same functions as the telephone answering application.

2. Octel's Voice Forms Application

The jury found that Octel's Voice Forms application infringes claims 1 and 10 of the '436 patent under the doctrine of equivalents. The district court denied Octel's motion for JMOL, and Octel appeals.

The crux of Octel's argument is that the only evidence offered at trial on infringement under the doctrine of equivalents was a series of conclusory responses by TRI's expert, Mr. Prentice. Octel also argues that its Voice Forms application was never identified by name during the testimony on infringement.

As Octel notes, a finding of infringement under the doctrine of equivalents requires particularized testimony showing equivalence on a limitation-by-limitation basis. See, e.g., Texas Instruments, Inc. v. Cypress Semiconductor Corp., 90 F.3d 1558, 1567, 39 USPQ2d 1492, 1499 (Fed. Cir. 1996). Octel's position is undercut, however, by the testimony of Octel's founder, Mr. Olson, who admitted that if Octel's systems were determined to have the recited "speech detector," they would infringe claims 1 and 10 of the '436 patent both literally and under the doctrine of equivalents. Consequently, particularized testimony was required only as to the recited speech detector. That testimony was provided by Dr. Gibson, who testified that Octel's Aspen and Sierra systems include components that operate in much the same way as the speech detector claimed in the patent.

Octel's objection that the Voice Forms application was never identified by name is answered by the following testimony from Mr. Olson:

QUESTION: What options on the system under claim 10 would be both literally and – would both literally and under the doctrine of equivalents infringe if Octel's systems had a speech detector?

ANSWER: Voice Forms would be the one I would pick.

3. NTI's Startalk System

The jury found that NTI's Startalk system does not infringe claims 1 and 10 of the '436 patent. The district court denied TRI's motion for JMOL to overturn the jury's verdict. On appeal, TRI urges that the evidence was insufficient to support the verdict. In fact, however, there was substantial evidence from which a reasonable jury could find that NTI's Startalk system did not infringe. At trial, Mr. Mundy, an NTI engineer who helped design the Startalk system, testified that the system does not have the recited "speech detector." Furthermore, Dr. Larky testified that Startalk is not preferential to speech and lacks several of the other claimed limitations. The jury's verdict therefore must be upheld.

4. NTI's Meridian Mail System

The jury found that NTI's Meridian Mail system does not infringe claims 1 and 10 of the '436 patent. The district court denied TRI's motion for JMOL on this issue, and TRI appeals. We conclude that substantial evidence supports the jury's finding of non-infringement. Dr. Larky testified that Meridian Mail does not have a speech detector, but instead records everything other than touch tones. He also testified that Meridian Mail lacks the recited interface means for coupling to a telephone line.

5. NTI's AABS System

The jury found that NTI's AABS system does not infringe claims 1 and 10 of the '436 patent. In denying TRI's motion for JMOL on this issue, the district court concluded that there was substantial evidence to support the jury's verdict.

We agree with the district court that substantial evidence supports the jury's verdict. For example, Mr. Solpietro, an NTI engineer, testified that the AABS system does not discriminate between speech and non-speech, thus negating the recited "speech detector" limitation. In addition, Dr. Larky testified that the AABS system includes neither the recited speech detector nor the recited means for interfacing to a telephone line.

II. The '817 Patent

As a preliminary matter, Octel argues that this court lacks subject matter jurisdiction to review TRI's appeal of the validity of the '817 patent because TRI failed to appeal the district court's finding of non-infringement. Octel asserts that there is no remaining case or controversy concerning the '817 patent since infringement is no longer in issue. That argument, however, was rejected by the Supreme Court in Cardinal Chemical Co. v. Morton International, Inc., 508 U.S. 83 (1993), and we therefore reject Octel's jurisdictional argument.

On the merits, TRI appeals the portion of the judgment holding claim 1 of the '817 patent invalid as anticipated or obvious over the prior art. NTI appeals the district court's refusal to set aside the jury's verdict that the best mode was disclosed in the '817 patent.

A. Obviousness

The jury found claim 1 of the '817 patent invalid because it was (a) anticipated by Shepard; (b) anticipated by Con Mode 1; and (c) obvious in light of the prior art. On TRI's motion to overturn the verdict, the district court agreed that Shepard did not disclose all of the recited elements. The court ruled, however, that there was substantial evidence that claim 1 was anticipated or rendered obvious by Con Mode I.

The '817 patent is a continuation of the '436 patent, but it claims different features of the disclosed invention. Unlike the claims of the '436 patent, claim 1 of the '817 patent does not include a speech detector or interface means, and it is not limited to telephone applications. In summary, claim 1 recites an apparatus for carrying on a programmed conversation with a respondent, which includes a message storage unit, a response recorder unit, a pause detector, an alternate message storage unit, and means for activating the alternate message storage unit. The claimed invention permits a programmed conversation to be altered by playing an alternative audio message rather than the next audio message in a sequence if the duration of the respondent's response is shorter than a specified time.

On appeal, TRI argues that there is no substantial evidence to support the finding that the prior art renders obvious the recited "alternate message storage unit" limitation or the recited "means for activating the alternate message storage unit" limitation. TRI also flatly states that "no other prior art in evidence discloses or suggests any such structure," although TRI elsewhere concedes that "Shepard does have alternate message storage units."

There is substantial evidence from which the jury could find that claim 1 was anticipated by or obvious over the prior art. Dr. Larky explained to the jury with the aid of detailed exhibits that claim 1 of the '817 patent is nearly identical to

claim 17 of Mr. Theis's 1975 patent application, a claim that was previously held to be invalid based on the sale of Con Mode I. See In re Theis, supra. Dr. Larky further explained how the recited elements, including both the "alternate message storage unit" limitation and the "means for activating that storage unit" limitation, were contained in Con Mode I.

Mr. Theis himself admitted that the "general concept" claimed in the '817 patent was also claimed in the 1975 application, and he acknowledged that the claims of that application were held to be invalid in In re Theis. We reject TRI's suggestion that the features of Con Mode I, which was held to be on sale, are identified exclusively by the claims of that rejected application. The jury had before it affidavits and testimony from various witnesses concerning what was contained in the Con Mode I units, evidence from which it could reasonably draw inferences and conclusions. In view of the evidence in the record, TRI has failed to establish reversible error with respect to the jury's verdict on the validity of claim 1 of the '817 patent.

B. Best Mode

The jury found that claim 1 of the '817 patent was not invalid for failure to disclose the best mode, and the district court denied NTI's motion for JMOL. Although the '817 patent does not recite a speech detector, NTI argues that the recited "pause detector" is the same circuit as the speech detector, and that he '817 patent suffers from the same "best mode" deficiency as the '436 patent.

Our conclusion that the district court properly upheld the jury's verdict on best mode for the '436 patent disposes of the issue with respect to the '817 patent. NTI has failed to establish that the speech detector/pause detector was concealed or

otherwise inadequately disclosed to allow one of ordinary skill in the art to practice the best mode.

III. The '647 Patent

The '647 patent describes a message retrieval system that includes a plurality of answering machines, message memory units (MMUs), and retrieval consoles. Incoming telephone calls are automatically answered and information from callers is recorded on MMUs for later playback and transcription by operators. Alternatively, the operators can conduct interactive dialogue with callers and can switch back and forth between dialogue mode and transcription mode as needed.

Claim 1 of the '647 patent, the only claim at issue, recites a message retrieval system including a retrieval console coupled to a plurality of MMUs, means for determining the age of messages stored in the MMUs and generating an alarm signal indicating excessive delays between storage and playback, and means for automatically modifying the system in response to the alarm signal.

The jury found that claim 1 was either anticipated or rendered obvious by the prior art Con Mode 3020. The district court, however, granted TRI's motion for JMOL on that issue, holding that there was insufficient evidence that the prior art disclosed or suggested the recited "means for automatically modifying the system."

The jury also found that none of Octel or NTI products infringe claim 1 of the '647 patent. The district court denied TRI's motion for JMOL, refusing to disturb the verdict of non-infringement. Octel appeals the district court's ruling on validity, and TRI appeals the district court's ruling on infringement.

A. Validity

The jury found that claim 1 of the '647 patent was anticipated or rendered obvious by Con Mode 3020, a system that was on sale more than one year prior to the filing date of the application. The district court instructed the jury that one of the three limitations in the claim, the first two were included in Con Mode 3020. Thus, the only issue for the jury was whether the third limitation ("means for automatically modifying the system in response to the alarm signal to adapt the system to excessive delays between message storage and playback") was disclosed or obvious over Con Mode 3020. Octel contends that there was substantial evidence from which the jury could reasonably have concluded that the recited "means for automatically modifying the system" was disclosed in the prior art, and that the district court therefore erred in granting TRI's motion for JMOL on this issue.

The written description in the '647 patent describes the way the system adapts to excessive delays between the recording and transcription of calls. It states that the system includes

> means for monitoring a parameter indicative of the age of messages stored in message memory units and for automatically generating an alarm signal in the event the parameter exceeds a threshold indicative of excessive delays between the time of recording and the time of playback of messages stored in the message memory unit. In addition, means are provided for modifying the system in response to the alarm signal to adapt the system to excessive delays between message recording and playback. For example, in the preferred embodiment described below, the

> modifying means operates to prevent further messages from being recorded on a message memory unit until the excessively old messages have been transcribed. In this way, excessive callback delays are avoided.

Octel notes that its expert, Mr. Gafford, presented evidence showing that (a) the "means for modifying" disclosed in the '647 patent is a software switch that is the same switch used to flash a light when message delays exceed a predetermined time limit; (b) Con Mode 3020 included such a switch for flashing a light; (c) the recited switch performed a function that was the same as or equivalent to the function performed by the Con Mode 3020 delay alarm; and (d) based on the level of skill in the art, any differences between the indicators provided in Con Mode 3020 and the recited "means for modifying" would have been obvious to one of ordinary skill in the art. Octel argues that the switch constitutes the structure for performing the recited "means for automatically modifying the system," and that the actual modification (e.g., disabling an MMU) is not part of the claim. TRI argues, and the district court agreed, that Mr. Gafford's testimony merely established that Con Mode 3020 had a switch that enabled the system to extend its notification of excessive delay, but that the switch did not constitute "means for automatically modifying" the system, as required by the claim.

We conclude that the district court's analysis is correct. Mr. Gafford testified, in essence, that the recited "means for automatically modifying the system" should be interpreted to include a switch that can perform any of various notification functions that might permit an operator to take some action. His testimony, however, was premised on an unduly broad interpretation of the term "automatically modifying the system." This term connotes a change in the structure or properties of the

claimed system without human intervention. The written description provides three examples of "automatically modifying the system": (1) disabling the MMU from receiving more calls; (2) changing the prerecorded message in the answering machine to indicate a longer callback time to callers; and (3) connecting additional retrieval consoles. Mr. Gafford testified that the required "means for automatically modifying the system" would be provided by any means that provoked something or someone to "respond to the alert signal . . . and to take some action," such as "a light that flashes twice a second that an operator can see, an alert tone or horn that makes a sound when this alarm occurs." In his examples, however, the "means" do not result in any automatic change in the structure or properties of the claimed system, but merely provide a human operator notice that a change needs to be made. The jury was thus presented with an incorrect yardstick with which to measure the prior art Con Mode 3020 system.

Moreover, Mr. Gafford testified that the structure disclosed in the '647 patent for performing the recited "automatic modifying" was nothing more than a software switch contained in software running in a microprocessor. That testimony is inconsistent with the patent specification itself. For example, in order to perform the function of disabling the MMU in the '647 patent, a separate "disable MMU" signal is generated through decoding logic, latches, and an output buffer on a unit interface card. Mr. Gafford's testimony similarly fails to account for the structure required to perform the "automatically modifying" functions of changing the prerecorded message or automatically interconnecting additional retrieval consoles as described in the '647 patent. By limiting the "means for modifying" to a single switch, Mr. Gafford's testimony disregards those alternative embodiments. Accordingly, Mr. Gafford's conclusion that the Con Mode 3020 system included the recited "means for automatically modifying" its

system to adapt to excessive delays between message storage and playback was based on incorrect claim interpretation and did not provide the substantial evidence from which a reasonable jury could have concluded that claim 1 was anticipated or rendered obvious by Con Mode 3020. The district court therefore did not err in granting TRI's motion for JMOL on this issue.

B. Infringement

The jury found that Octel's Sierra and Aspen systems did not infringe claim 1 of the '647 patent, either literally or under the doctrine of equivalents. The district court denied TRI's motion for JMOL.

Substantial evidence supports the jury's verdict. Mr. Olson testified that Octel's systems do not use a retrieval console and do not distinguish between played and unplayed messages, as is required by claim 1. Moreover, TRI's own expert, Mr. Prentice, admitted that where no effort is made to distinguish between played and unplayed messages for the purpose of automatic deletion, "such a system would not infringe claim 1 of the '647 patent."

IV. The '635 Patent

The '635 patent describes a message delivery system that includes a plurality of playback units, each of which stores a segment of an audio message. The segments are played in sequence and broadcast over multiple telephone lines. The district court granted Octel's motion for summary judgment that its systems do not infringe claims 1 and 7 of the '635 patent.

The district court's non-infringement ruling was based on its conclusion that claims 1 and 7 require that message segments be supplied simultaneously to a plurality of telephone

lines, which Octel's system sends message segments to different lines at different times. On appeal, TRI argues that the district court erroneously added to the asserted claims the requirement that messages be transmitted simultaneously. TRI contends that the claims should be interpreted to cover systems in which an audio signal is supplied to different interface units at different times.

We discern no error in the district court's interpretation of the claims. Claims 1 and 7 require "a plurality of line interface units, each of which is coupled to a respective telephone line." Claim 1 requires "means . . . for supplying the audio signals of the activated playback units to the plurality of line interface units." Claim 7 further requires "means for . . . supplying the audio signals of the activated playback units to the interface units." The specification makes it clear that the invention contemplates that the same signal is supplied simultaneously to multiple telephone lines, and the disclosed structure for performing the recited function of the means-plus-function limitations operates in that manner. See Abstract ("in order to broadcast a message made up of a plurality of message segments to a number of line interface units"); Fig. 2a (showing audio lines from multiple announce units converging at audio analog mux 21 and fed to a single audio output line through amplifier 2); Figs. 2b and 3 (showing multiple audio lines to the interface units tied together); col. 1 at lines 40-42 ("in order simultaneously to broadcast the same message to each of the interface units"); col. 4 at lines 51-54 ("The output of this audio amplifier 2 is connected via line 2a to each of the line interface units 60 for broadcast to the respective telephone lines 50"); col. 7 at lines 50-54 ("The audio signal is generated by the amplifier 2 on line 2a and contains the audio message which is passed by the line interface units 60 to the respective telephone lines."); and col. 8 at lines 56-59 ("This announce unit

90 replays its recorded message segment, which is passed via the audio analog multiplexer 21 to the amplifier 2, and from the amplifier 2 to each of the line interface units 60.").

TRI's assertion that the claims should be interpreted in a manner that merely requires that "overlapping" message segments be sent to different telephone lines is not persuasive. Octel presented undisputed evidence that its systems combine a series of phrases into a prompt, then convert the prompt into an audio signal that is transmitted over a single telephone line to a single caller. Because Octel's systems do not transmit the same signal to more than one telephone line, the district court properly held that those systems do not infringe TRI's rights under the '635 patent.

V. The '255 Patent

The '255 patent, which issued from an application filed on December 29, 1977, describes a call distributor system that automatically answers telephone calls and records an initial message from each caller. The district court granted NTI's motion for summary judgment, holding claims 1-4 of the '255 patent invalid based on an offer to sell the invention more than one year before the filing date of the application.

The district court granted NTI's motion on the basis of the following evidence: (a) a signed letter dated October 29, 1974, that appeared to offer to sell the claimed invention to the Ann Arbor Transportation Company (AATA); (b) evidence that an officer of CVTC, a company associated with TRI, worked with a CVTC sales representative to prepare a response to a Request for Quotation received from AATA and that the author of the letter was "dealing with the [AATA]"; and (c) evidence that the invention of the '255 patent was reduced to practice before the date of the letter. TRI appeals the summary judgment ruling, arguing that there is no direct evidence that the

letter was actually received by AATA and that the invention had never been embodied in physical form.

We reject each of TRI's challenges to the district court's ruling. As to TRI's contention that there was no direct evidence that the letter was received, the district court had before it proof that the letter was signed and contained a detailed offer, and that the author of the letter was "dealing with the [AATA]," indicating communication with the recipient. Moreover, the court properly concluded that statements from Theis and a CVTC officer to the effect that they did not recall sending the letter to AATA did not rebut the evidence that an offer was made. Nor is there any force to TRI's argument that the letter was not found in AATA's files, since there was evidence that the letter would have been discarded when AATA moved to new quarters in the 1980s.

TRI's argument that the invention was not "embodied in physical form" at the time of the alleged offer is directly contradicted by its own admission in a separate action and does not create a genuine issue of fact precluding summary judgment. Moreover, a reduction to practice is not a requirement for application of the on-sale bar. UMC Elecs. Co. v. United States, 816 F.2d 647, 656, 2 USPQ2d 1465, 1472 (Fed. Cir. 1987). Accordingly the district court's ruling on invalidity is affirmed.

VI. Motion for a New Trial

TRI argues that it is entitled to a new trial because the trial judge failed to instruct the jury on the meaning of disputed terms in the '436 and '647 patents and because the great weight of the evidence is contrary to the verdict.

Regarding the jury instructions, TRI insisted throughout the trial that the meaning of disputed claim terms was a question of fact that should be left to the jury. Having urged the district

court to submit the issues of claim construction to the jury, TRI cannot now argue for a new trial on the ground that the district court did what TRI asked. Under the doctrine of "invited error," a party may not seek reversal based on an act that the party itself requested. See Weinar v. Rollform, Inc., 744 F.2d 797, 809, 223 USPQ 369, 376 (Fed. Cir. 1984).

As to TRI's assertion that the verdicts are against the great weight of the evidence, we have concluded that the verdicts are fully supported by the evidence. Consequently, we affirm the denial of the request for a new trial.

VII. Inequitable Conduct

NTI and Octel allege that TRI's patents are unenforceable due to inequitable conduct by Mr. Theis before the PTO over a period of several years. Following a bench trial on the issue, the district court carefully considered all of the alleged misconduct by Mr. Theis and concluded that NTI and Octel had failed to prove by clear and convincing evidence that Mr. Theis intended to deceive the PTO. As the district court noted, the facts present a close case. Nonetheless, we conclude that the court did not abuse its discretion in ruling against NTI and Octel on this issue.

The facts surrounding the prosecution of TRI's patents are set forth in detail in the district court's findings. The district court concluded that some of Mr. Theis's activities over a period of years raised questions about his candor before the PTO. The court, however, pointed to other actions by Mr. Theis that were inconsistent with an intent to deceive the PTO, such as his abandonment of allowed claims in one application, his requests for extensions in two instances to investigate a possible "on sale bar," his advice to the examiner that the outcome of his 1975 patent application (in which the claims were eventually held invalid) could be dispositive of his

1977 application, and his narrowing of certain claims in view of the shipment of devices.

On appeal, NTI and Octel argue that the district court improperly applied the materiality and intent elements of inequitable conduct to the circumstances surrounding each patent separately, instead of considering all the circumstances together. NTI also argues that the district court omitted from its final conclusions certain facts that were included in its tentative conclusions, including Mr. Theis's alleged awareness of the importance of disclosing his prior Con Mode system sales activity. Finally, NTI argues that the district court failed to conduct the required balancing of materiality and intent.

NTI and Octel have the burden of showing that the district court abused its discretion in holding that inequitable conduct was not proved by clear and convincing evidence. On the present record, we cannot say that the district court abused its discretion. We do not agree, as NTI and Octel urge, that the district court applied a "piecemeal" analysis to TRI's patents. To the contrary, the district court's findings of fact and application of the law to the facts were thorough and took into account Mr. Theis' entire course of conduct before the PTO. The district court likewise did not abuse its discretion by omitting some of its tentative findings in its final ruling. Tentative findings are just that – tentative – and are subject to revision or omission upon further consideration. In the end, the district court's ruling was based on its conclusion that Octel and NTI had failed to prove by clear and convincing evidence that Mr. Theis intended to deceive the patent examiner. That conclusion is highly factual and thus is largely immune from appellate review. Finding no error in the district court's legal or factual analysis, we affirm the court's ruling on inequitable conduct.

VIII. Cost Award

The district court found that Octel and NTI were the prevailing parties in the case and awarded costs against TRI totaling $385,737.79. TRI appeals the cost award on the basis that (a) the award is premature and fails to account for the fact that TRI partly prevailed; (b) certain portions of the costs are not recoverable; and (c) there is insufficient evidence to support the award.

As to point (a), TRI argues that because it prevailed on the issue of inequitable conduct, it was an abuse of discretion to award costs against it for that part of the lawsuit. Moreover, TRI notes that it has claims against NTI arising from two other TRI patents, which the district court severed from this case before trial. TRI argues that the prevailing party cannot be determined until after those claims are resolved.

Our disposition of the validity and infringement issues resolves any question about whether Octel and NTI are the prevailing parties. Octel and NTI have succeeded in invalidating the only asserted claims of the '436 patent, the '817 patent, and the '255 patent, thus entirely defeating TRI's claim for damages. TRI also failed to prove infringement with respect to the '647 and '635 patents. That Octel and NTI did not succeed in having all of the patents in suit declared unenforceable – an alternative ground of defense – does not lessen the extent to which they prevailed on the merits. See Manildra Milling Corp. v. Ogilvie Mills, Inc., 76 F.3d 1178, 1183, 37 USPQ2d 1701, 1711 (Fed. Cir. 1996) ("as a matter of law, a party who has a competitor's patent declared invalid meets the definition of 'prevailing party.'"). Moreover, the resolution of the severed action by TRI against NTI is a separate matter for purposes of the assessment of costs. A final judgment was issued in this case, and it is with respect to the judgment in this case that the prevailing party determination must be made.

The only remaining question is whether, under Ninth Circuit law, the district court abused its discretion in awarding costs. See Manildra, 76 F.3d at 1183, 37 USPQ2d at 1712. We hold that it did not. See, e.g., Cornwell Quality Tools Co. v. C.T.S. Co., 446 F.2d 825, 833 (9th Cir. 1971) (if neither party completely prevails, district court has broad discretion to apportion and tax costs); K-2 Ski Co. v. Head Ski Co., 506 F.2d 471, 182 USPQ 724 (9th Cir. 1974) (no abuse of discretion to award full costs to plaintiff who prevailed on only 2 of 12 asserted trade secret claims).

As to point (b), the only specific objection advanced by TRI is that Octel included costs for audio visual presentations. The Ninth Circuit allows the costs of visual aids to be awarded under 28 U.S.C. § 1920. See Maxwell v. Hapag-Lloyd Aktiengesellschaft Hamburg, 862 F.2d 767, 770 (9th Cir. 1988) ("exemplification and copies of papers" also covers illustrative materials); Little Oil Co. v. Atlantic Richfield Co., 852 F.2d 441, 448 (9th Cir. 1988).

Finally, as to the contention that copying expenses were unsubstantiated, TRI has failed to point out any specific deficiencies. Moreover, the district court reduced the amount originally requested by Octel and NTI in order to ensure that TRI would not have to pay more than was reasonable necessary for trial. The amount allowed in costs is a matter within the district court's broad discretion, and we find no abuse of that discretion in this case.

Each party shall bear its own costs for this appeal.

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
(San Jose Division)

OCTEL COMMUNICATIONS CORPORATION, a Delaware corporation; NORTHERN TELECOM INC., a Delaware corporation,

Plaintiffs,

vs.

THEIS RESEARCH, INC., an Illinois corporation, and PETER F. THEIS, an individual,

Defendants.

AND RELATED CONSOLIDATED COUNTERCLAIMS

Case No.: C-92 20217 RMW (EAI)

FINAL JUDGMENT

Filed: Jan. 2, 1996

Richard W. Wieking
Clerk, U.S. District Court
Northern District of California
San Jose

In this declaratory judgment action, defendant Theis Research, Inc. ("TRI") claimed that plaintiffs Octel Communications Corporation ("Octel") and Northern Telecom Inc. ("NTI") both infringed U.S. Patent Nos. 4,539,436 (the "436 patent"), 4,692,817 ("the '817 patent"), 4,719,647 ("the '647 patent"), and 4,439,635 ("the '635 patent"). TRI further claimed that NTI (but not Octel) infringed two additional patents, U.S. Patent Nos. 4,150,255 ("the '255 patent") and 4,559,416 ("the '416 patent"). Both Octel and NTI denied infringement, and raised various defenses to the validity and enforceability of the patents.

Pursuant to certain rulings made at the December 16, 1993 pre-trial conference and to certain stipulations entered into by the parties, trial was set for three phases: a first trial to the court on the equitable defenses of patent unenforceability and laches[1]; a second jury trial on the issues of validity and infringement of the '436, '817 and '647 patents[2]; and a third seriatim jury trial (if necessary) on the issues of damages and willful infringement with respect to the '436, '817 and '647 patents. The first trial to the Court was conducted from January 31 through February 9, 1994. The second trial before a jury commenced on August 22, 1994 and the jury returned its verdict

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[1]Following the jury's verdict on the issues of validity and infringement, the parties stipulated that they did not need the Court's ruling on the laches defense at this time.

[2]Prior to the first trial, the court granted Octel's motion for summary judgment of non-infringement of the '635 patent, and NTI's motion for summary judgment of invalidity of the '255 patent. The parties stipulated, prior to the second trial, that TRI's claims against NTI with respect to the '635 and '416 patent would be severed and stayed for later trial.

on October 5, 1994. A third trial was unnecessary in light of the jury's verdict in the second trial.

Pursuant to Rule 54, F.R.Civ. P., the Court has determined that there is no just reason for any delay in entering judgment on the issues resolved by the jury and by the Court, and hereby directs the clerk to enter Final Judgment as set forth below.

I. The Enforceability Issues

1. The '436 patent is not unenforceable due to inequitable conduct.

2. The '817 patent is not unenforceable due to inequitable conduct.

3. The '647 patent is not unenforceable due to inequitable conduct.

4. The '255 patent is not unenforceable due to inequitable conduct.

5. United States Patent No. 4,328,396 is not unenforceable due to inequitable conduct.[3]

6. Defendant Peter F. Theis did not engage in a pattern of misconduct before the Patent Office sufficient to render all of the patents in suit unenforceable.

II. The Validity Issues

1. Claims 1-4 of the '255 patent are invalid because the claimed subject matter was offered for sale to Ann Arbor Transportation Authority more than one year prior to the filing date of the '255 patent application.

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[3]The '396 patent is in the chain of patent applications leading to the issuance of the '436 and '817 patents.

2. Claim 1 of the '647 patent is invalid because it is anticipated by the prior art Con Mode 3020.

3. Claim 1 of the '647 patent is invalid because it is rendered obvious by the prior art.

4. Claim 1 of the '817 patent is invalid because it is anticipated by the prior art Con Mode I.

5. Claim 1 of the '817 patent is invalid because it is anticipated by the prior art U.S. Patent No. 3,300,586 ("the Shepard patent").

6. Claim 1 of the '817 patent is invalid because it is rendered obvious by the prior art.

7. Claim 1 of the '817 patent is not invalid for indefiniteness.

8. Claim 1 of the '817 patent is not invalid for failure to disclose the best mode.

9. Claim 1 of the '436 patent is invalid because it is rendered obvious by the prior art.

10. Claim 1 of the '436 patent is not anticipated by either the prior art Con Mode I or the prior art Shepard patent.

11. Claim 1 '436 patent is not invalid for indefiniteness.

12. Claim 1 of the '436 patent is not invalid for failure to disclose the best mode.

13. Claim 10 of the '436 patent is invalid because it is rendered obvious by the prior art.

14. Claim 10 of the '436 patent is not anticipated by either the prior art Con Mode 1 or the prior art Shepard patent.

15. Claim 10 of the '436 patent is not invalid for indefiniteness.

16. Claim 10 of the '436 patent is not invalid for failure to disclose the best mode.

II. The Infringement Issues

1. Octel's Sierra and Aspen systems do not infringe either claim 1 or 7 of the '635 patent, literally or under the doctrine of equivalents.

2. Octel's Sierra and Aspen systems do not infringe claim 1 of the '647 patent, literally or under the doctrine of equivalents.

3. Octel's Sierra and Aspen systems do not literally infringe claim 1 of the '817 patent.

4. The telephone answering and voicemail applications of Octel's Sierra and Aspen systems do not infringe claim 1 of the '817 patent under the doctrine of equivalents.

5. The Voice Forms application of Octel's Sierra and Aspen systems infringes claim 1 of the '817 patent under the doctrine of equivalents.

6. Octel's Sierra and Aspen systems do not literally infringe claim 1 of the '436 patent.

7. The telephone answering application of Octel's Sierra and Aspen systems does not infringe claim 1 of the '436 patent under the doctrine of equivalents.

8. The Voice Forms application of Octel's Sierra and Aspen systems infringes claim 1 of the '436 patent under the doctrine of equivalents.

9. Octel's Sierra and Aspen systems do not literally infringe claim 10 of the '436 patent.

10. The telephone answering and voicemail applications of Octel's Sierra and Aspen systems do not infringe claim 10 of the '436 patent under the doctrine of equivalents.

11. The Voice Forms application of Octel's Sierra and Aspen systems infringes claim 10 of the '436 patent under the doctrine of equivalents.

12. NTI's Meridian Mail, Startalk and AABS products do not infringe claim 1 of the '817 patent literally or under the doctrine of equivalents.

13. NTI's Meridian Mail, Startalk and AABS products do not infringe claim 1 of the '436 patent literally or under the doctrine of equivalents.

14. NTI's Meridian Mail, Startalk and AABS products do not infringe claim 10 of the '436 patent, literally or under the doctrine of equivalents.

15. NTI's Meridian Mail product does not infringe claim 1 of the '647 patent, literally or under the doctrine of equivalents.

As the prevailing parties in this action, Octel and Northern Telecom shall be allowed to recover their costs against TRI.

Dated: 12/29/95

/s/
Ronald M. Whyte
United States District Judge

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

OCTEL COMMUNICATIONS CORPORATION, a Delaware corporation; NORTHERN TELECOM, INC., a Delaware corporation,

Plaintiffs,

v.

THEIS RESEARCH, INC., an Illinois corporation, and PETER F. THEIS, an individual,

Defendants.

AND RELATED CONSOLIDATED COUNTERCLAIMS

NO. C-92-20217 RMW (EAI)
[C-93-20287 JW (EAI)]
[C-93-20288 RMW (PVT)]

ORDER ON DEFENDANTS' MOTION FOR JUDGMENT AS A MATTER OF LAW THAT CLAIMS 1 AND 10 OF THE '436 PATENT ARE VALID

Filed: Nov. 14, 1996

Richard W. Wieking
Clerk, U.S. District Court
Northern District of California
San Jose

Defendants Peter F. Theis and Theis Research, Inc. (collectively referred to below as "TRI") seek a judgment as a matter of law that claims 1 and 10 of the '436 patent are valid. Specifically, TRI argues that "[p]laintiffs did not present substantial evidence to support the legal conclusion that claims 1 and 10 were obvious from the prior art; the jury's verdict on this issue is wrong as a matter of law." Def.'s Memo, p.2. The court disagrees and hereby denies the motion.

TRI correctly notes that "obviousness" is a question of law. However, "obviousness is a legal determination that may be submitted to the jury with proper instruction." In Re Hayes Microcomputer Products Patent Lit., 982 F.2d 1527, 1539 (Fed. Cir. 1992). TRI did not object to the court's instructions on the "obviousness" question. The court's task in connection with this motion is to presume that the jury correctly resolved the factual disputes in favor of Octel and NTI and leave those findings undisturbed if they are supported by substantial evidence. Then, the court must examine the legal conclusion to see whether it is correct in light of the presumed jury findings. Jurgens v. McKasy, 927 F.2d 1552, 1557 (Fed. Cir. 1991).

The jury must have found that all elements of claims 1 and 10 of the '436 patent were not united in either the Shepard patent or in the Con Mode I system, as it found that neither anticipated the '436 patent. However, it did find the differences between the claimed inventions and the prior art were such that the inventions as a whole would have been obvious to a person of ordinary skill in the art. Although this ultimate conclusion is one that properly could have been left for the court, the court finds that it is correct based upon the jury's presumed factual findings.

The essential differences between the prior art Con Mode I and the '436 invention were, according to Theis, that the Con Mode I did not have a "speech detector" and the "interface means." Trial Tr. 836-837 (Theis). Even if that

testimony is accepted as accurate,[1] the '436 invention would have been obvious to one skilled in the art. The problem with the Con Mode I was that it was not recognizing speech from other noise on the line. Trial Tr. 750-753 (Theis). The problem was solved by use of a "speech detector," a type of conventional voice actuation circuit that Theis said was known and accepted in the industry. Trial Tr. 753-57 (Theis). Further, the specification of the '436 patent identifies the "interface means" as "an RDM-ZR installed by the telephone company." '436 patent at 3:35-6. The RDM-ZR was a known prior art device, as Theis acknowledged in his affidavit to the patent office dated August 24, 1984.

> As of February 4, 1974, the RDMZR was a known interface coupler distributed by American Telephone & Telegraph Co., as evidenced by the attached portions of the document attached as Exhibit L dated June 1971. Because the RDMZR was a known prior art device in early 1974, I did not burden my original application with details of its known structure and operation.
> Pltfs' Trial Ex. At ¶ 13 (emphasis added).

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[1]The record supports a conclusion that Con Mode I had the claimed "interface means." TRI argues in their motion for a new trial that the claimed "interface means" detects an incoming call, seizes the line, transmits the signals on the line to the system, determines when the caller has hung up and hangs up." Defs' New Trial Memo at p. 12. These are the same functions which Theis, in his February 3, 1978 affidavit to the patent office, says were performed by the Con Mode I. Trial Ex. 21, ¶ 7c. The jury presumably found that the "interface means" in the '436 inventions performed the identical function as, and was an equivalent structure to, the line control card in the Con Mode I.

The fact that the "speech detector" and RDM-ZR were known prior art devices does not mean that the inventions set out in claims 1 and 10 of the '436 patent were necessarily obvious. The teachings of two or more prior art references may be combined as a basis for finding obviousness only if there is some teaching or suggestion in the prior art supporting that combination. The combination of elements in the claims at issue were suggested by Con Mode I, given the objective of the Con Mode I, the experienced problem with it, and the knowledge of those skilled in the art of "speech detectors" and the RDM-ZR. All Theis did to correct them was to use a "speech detector" which he admits was a well known and accepted device in the industry and a better interface means. A person skilled in the art who was faced with the problem facing Theis would certainly have been led to the use of these existing prior art devices by knowledge of the Con Mode I and its deficient performance. The correction of the deficiencies involved no inventive talent.

For the reasons stated, TRI's motion for judgment as a matter of law is denied.

DATED: 11/12/96

/s/ Ronald M. Whyte
RONALD M. WHYTE
United States District Judge

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

OCTEL COMMUNICATIONS CORPORATION, a Delaware corporation; NORTHERN TELECOM INC., a Delaware corporation,

Plaintiffs,

v.

THEIS RESEARCH, INC., an Illinois corporation, and PETER F. THEIS, an individual,

Defendants.

AND RELATED CONSOLIDATED COUNTERCLAIMS

No.: C-92 20217 RMW (EAI)
[C-93-20287 JW (EAI)]
[C-93-20288 RMW (PVT)]

ORDER ON DEFENDANTS' MOTION FOR JUDGMENT AS A MATTER OF LAW ON VALIDITY OF CLAIM 1 OF THE '817 PATENT

Filed: Nov. 14, 1996

Richard W. Wieking
Clerk, U.S. District Court
Northern District of California
San Jose

Defendants Peter F. Theis and Theis Research, Inc. (collectively referred to below as "TRI") seek a judgment as a matter of law that Claim 1 of the '817 patent is valid. The court hereby denies the motion, although it does not find that the Shepard patent anticipates Claim 1.

The jury found that Claim 1 of the '817 patent is invalid because it is anticipated by the Shepard patent. The evidence of anticipation, including Exhibits 2740(N) and (O) and Dr. Larky's testimony at 2711 - 2722, does not fully support the conclusion that all of the elements of Claim 1 are found in the Shepard patent. The element labeled 1(b) on plaintiffs' Exhibit 2740(N) is not met because the '817 patent requires at least two caller responses to be recorded for playback.[1]

The element labeled 1(e) on Exhibit 2740(O) is also not literally covered by Shepard. See Order on Octel's Motin for Judgment as a Matter of Law on Non-Infringement of the '817 Patent.[2]

Since Shepard does not contain all the elements of the '817 patent, it does not anticipate Claim 1.

The jury also found that Claim 1 is invalid because it is anticipated by Con Mode I. The evidence supports the finding that Con Mode I contained all the elements of Claim 1, unless Claim 1 is interpreted to require a "speech detector" within the

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[1]TRI takes the position that Claim 1 reads on an apparatus that records only one answer. The court disagrees. However, if that construction of Claim 1 is accepted, then that element is met by Shepard.

[2]TRI argues that the language "the respondent's response . . . has a duration within a selected time interval" reads, under the doctrine of equivalents, on a device that determines that a response exceeds a certain length. If TRI is correct (and the court does not think it is), then that element is included in Shepard.

element describing the "pause detector." If TRI is given the benefit of that interpretation (which the court does not endorse) and "speech detector" is defined as it is for the '436 patent, Con Mode I is not anticipatory as it did not have a "speech detector." However, Con Mode I would clearly have made the '817 invention obvious to one skilled in the art as explained in the Order on Defendants' Motion for Judgment as a Matter of Law that Claims 1 and 10 of the '436 Patent Are Valid and given what the jury could reasonably have concluded was included in Con Mode I.

For the reasons stated, TRI's motion for judgment as a matter of law is denied.

Dated: 11/12/96

/s/ Ronald M. Whyte
RONALD M. WHYTE
United States District Judge

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

OCTEL COMMUNICATIONS CORPORATION, a Delaware corporation; NORTHERN TELECOM INC., a Delaware corporation,

Plaintiffs,

v.

THEIS RESEARCH, INC., an Illinois corporation, and PETER F. THEIS, an individual,

Defendants.

AND RELATED CONSOLIDATED COUNTERCLAIMS

No.: C-92 20217 RMW (EAI)
[C-93-20287 JW (EAI)]
[C-93-20288 RMW (PVT)]

ORDER ON DEFENDANTS' MOTION FOR JUDGMENT AS A MATTER OF LAW ON OCTEL'S INFRINGEMENT OF CLAIMS 1 AND 10 OF THE '436 PATENT

Filed: Nov. 14, 1996

Richard W. Wieking
Clerk, U.S. District Court
Northern District of California
San Jose

Defendants Peter F. Theis and Theis Research, Inc. (collectively referred to below as "TRI") seek a judgment as a matter of law that Octel infringes claims 1 and 10 of the '436 patent. The court hereby denies the motion.

TRI argues that if the term "speech detector" as used in claims 1 an 10 of the '436 patent is properly defined by the court, the claims read on Octel's systems in their telephone answering applications.[1] Octel responds by arguing that its systems do not contain "speech detectors" and do not meet the claim limitation that requires the ability to respond with a pre-recorded message to two or more voice communications from the caller.

Analysis

1. Claims at Issue

Claim 1 of the '436 patent reads

> 1. Apparatus for carrying on a programmed telephone conversation with a respondent via a telephone line adapted to carry a voice communication of the respondent, the apparatus including **means having a plurality of pre-recorded messages which are playable in sequence in response to a corresponding response from the respondent**, and further comprising:
>
> interface means for coupling said apparatus to the telephone line;

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[1]The Octel systems in their telephone answering and Voice Forms applications were alleged to infringe claims 1 and 10 of the '436 patent. The Voice Mail application was not alleged to infringe. Since the jury found that the Voice Forms application infringed under the doctrine of equivalents, TRI apparently has chosen to only seek a judgment as a matter of law on the telephone answering applications.

a **speech detector** coupled to the interface means;

detecting means, coupled to said **speech detector**, for detecting a pause in said voice communication of the respondent;

means, responsive to said pause, for causing the sending of the next pre-recorded message;

means, coupled to said **speech detector**, for detecting a lack of response from the respondent to a pre-recorded message; and

means responsive to said lack of a response for also altering the course of said programmed telephone conversation.

(Emphasis added)

Claim 10 states

10. Apparatus for carrying on a programmed telephone conversation with a respondent via a telephone line adapted to carry a voice communication of the respondent, the apparatus being characterized by an incoming mode in which said voice communication from said respondent can be passed into said apparatus, and an outgoing mode **in which an audio program containing a plurality of pre-recorded messages playable in sequence can be passed to said respondent**, comprising

interface means for coupling said apparatus to the telephone line;

a **speech detector** coupled to the interface means to monitor the voice communication on said telephone line; means, coupled to the **speech detector**, for detecting a pause in said voice communication of a predetermined duration;

means responsive to said pause for substantially instantaneously switching said system to said outgoing mode to reproduce the next of said pre-recorded messages; and

means responsive to the termination of each said pre-recorded messages for substantially instantaneously switching said system to said incoming mode.

(Emphasis added)

2. Construction of the Term "Speech Detector"

A review of the claims, specification and prosecution history of the '436 patent shows that the term "speech detector" as used in claim 1 is a specialized type of noise filter which is designed to respond preferentially to speech, as opposed to other noises, on a telephone line. A speech detector is distinguished from a noise detector which looks only for how much energy is present and whether it is over a particular threshold. The goal of a speech detector is to sense and respond to speech-like signals and not to be triggered by non-speech signals.

3. Substantial Evidence Supports the Conclusion that Octel's System Does Not Include a Speech Detector

Substantial evidence supports the conclusion that Octel's system did not include a "speech detector" as that term is used in the patent. Cohn testimony at 2316-18 and 2387; Olson testimony at 2404-06, 2415-19, 2421-25, 2427-33, 2440-58, 2488-91 and 2497-2512.

4. The Claims Require the Ability to Respond to More than One Voice Message from the Caller

Claim 1 of the '436 patent initially states that it is directed at an "[a]pparatus for carrying on a programmed telephone ~~conversation~~ . . . . ." '436 patent at 8:1-4 (emphasis added). It follows with a limitation requiring:

> means having a **plurality** of pre-recorded messages which are playable in sequence **in response to a corresponding response** from the respondent.

'436 patent at 8:4-7 (emphasis added). This language clearly requires multiple pre-recorded messages (a "plurality"), each of which is playable "in response to a corresponding" voice communication from the caller. Therefore, it logically follows that multiple voice communications from the caller from the caller are necessary in order for there to be a plurality of pre-recorded messages played in response.

Claim to is also directed to an "[a]pparatus for carrying on a programmed telephone conversation . . . ." '436 patent at 10:40-41. It, like claim 1, involves multiple pre-recorded messages to be played in sequence in response to each of a caller's voice communications. The invention consists of an apparatus having an outgoing mode for playing "a plurality of pre-recorded messages playable in sequence" to the caller. '436 patent at 10:46-47. The last element of the claim requires "means responsive to the termination of each of said pre-recorded messages for . . . switching . . . to said incoming mode." '436 patent at 10:62-64. The invention is characterized earlier in the claim as having "an incoming mode in which said voice communication from said respondent can be passed into said apparatus." '436 patent at 10:43-45. Therefore, the claim requires multiple pre-recorded messages playable in sequence. After each of these messages, the system must be capable of switching to an "incoming mode" in order to permit the caller's voice communications to be passed into the system. The invention necessarily involves the ability to handle multiple caller messages for its "programmed telephone conversation."

TRI also argues that "silence" or the use of touch-tones can be considered a response. However, in the context of the claims at issue, silence or the use of touch-tones cannot be

considered a "response" or "voice communication" as those terms are used in the claims.

The evidence showed that Octel's systems in their telephone answering applications did not provide for pre-recorded responses to two or more voice communications from a caller.

Conclusion and Order

Substantial evidence supports the jury's verdict of noninfringement. Therefore, TRI's motion for judgment as a matter of law is denied.

DATED: 11/12/96

/s/ Ronald M. Whyte
RONALD M. WHYTE
United States District Judge

United States Court of Appeals for the Federal Circuit

97-1176, -1178, -1179

OCTEL COMMUNICATIONS CORPORATION,

Plaintiff/Cross-Appellant,

and

NORTHERN TELECOM, INC.,

Plaintiff/Cross-Appellant,

and

PACTEL MERIDIAN SYSTEMS,
BOSTON TECHNOLOGY, INC.
and DIGITAL SOUND CORPORATION,

Plaintiffs,

v.

THEIS RESEARCH INC. and PETER F. THEIS,

Defendant-Appellants.

O R D E R

O R D E R

A combined petition for rehearing and suggestion for rehearing in banc having been filed by the APPELLANTS, THEIS RESEARCH, INC., and PETER F. THEIS, and the petition for rehearing having been referred to the panel that heard the appeal, and thereafter the suggestion for rehearing in banc having been referred to the circuit judges who are in regular active service,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for rehearing be, and the same hereby is, DENIED and it is further

ORDERED that the suggestion for rehearing in banc be, and the same hereby is, DECLINED.

The mandate has already issued.

Circuit Judge CLEVENGER did not participate in the vote.

FOR THE COURT,
JAN HORBALY, CLERK

Dated: December 29, 1997 By /s/ Alex Van Veen
Alex Van Veen
Staff Law Clerk /s/ amt

cc: NED L. CONLEY
ROBERT NEUNER, RON SHULMAN
OCTEL COMM V. THEIS RESEARCH INC, 97-1167,-1178,
-1179 (DCT - 92-CV-20217)

Filed: Dec. 29, 1997
Jan Horbaly, Clerk

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* Note: Pursuant to Fed. Cir. R. 47.6, this order is *
* not citeable as precedent. It is a public record. *
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